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# Theophrastus of Eresus

SOURCES FOR HIS LIFE, WRITINGS, THOUGHT AND INFLUENCE

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# Theophrastus of Eresus: *Commentary Volume 9.1*

*Sources on Music (Texts 714–726 C)*

*By*

Massimo Raffa



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*For Andrew Barker*





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After the two-volume work entitled *Theophrastus of Eresus: Sources for his Life, Thought and Influence* (Leiden-New-York-Köln: Brill 1992), a series of commentaries were planned in order to cover all the different areas of the philosopher's thought; this volume comes as a part of that wide-ranging project and is focused on the texts dealing with Music (see *Commentary* 9.2 pp. IX–XII).

I am grateful to William Fortenbaugh for asking me to write this book in the first place. I am also indebted to Egert Pöhlmann, Angelo Meriani, Stefan Hagel and Antonietta Provenza for sharing with me some important outcomes of their own research and providing indispensable advice, and to the anonymous reader who went through my typescript very carefully and in great detail, bringing to my attention some errors and inconsistencies and exposing some weaknesses in my argumentation. Deborah Kay and, again, William Fortenbaugh deserve my gratitude for amending my English.

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*Massimo Raffa*



## Introduction

The importance of Theophrastus' historical position (c. 372–287 BC) in the development of Greek thought can hardly be overstated. Not only is the span of time running from the last quarter of IV to the last decade of III cent. BC a crucial one in regard to political and cultural history—we need only recall the turmoil that led from the short-lived military supremacy of the Thebans to the rise of Macedonian power, and the advent of Hellenistic art and philosophy—but also a period of fundamental changes in both musical composition and performance, and in the way in which philosophers and theorists thought of musical structures and their relation to the human soul.

Only a few fragments have reached us of Theophrastus' writings on music. We are bound to regret the loss of what seems to have been a crucial part of our philosopher's thought and, as usual in these cases, we are left with the doubt whether to lay the blame upon the unpredictability of the manuscript tradition or the fact that after him harmonic science would take such a direction as to render his approach somehow peripheral to mainstream conceptions<sup>1</sup>—or perhaps both. Nevertheless, the material we have, for all its scantiness, is enough to give an idea of how outstanding and, in hindsight, extremely modern his contribution was if compared not only to ancient musical thought, but also to Western reflection as a whole on music, its origin, nature and aims, as well as its relation to the human soul, passions, and states of mind.

Our philosopher's ideas on these issues will be better dealt with, however, after an outline of the debate on music in his time. In what follows, I will distinguish between two aspects: on the one hand, the study of sound, its physical constituents and the way in which musical sounds (notes)<sup>2</sup> relate to each other to form intervals and scalar structures; on the other hand, the enquiry concerning sound as the audible expression of the soul's affections and movements. The first aspect amounts to what we usually call acoustics and harmonics respectively; the second covers the intriguing territory between

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<sup>1</sup> See especially text 716.

<sup>2</sup> I use the term “note” in the sense of the Aristoxenian *ᾠδόν*, i.e. a sound that maintains the same pitch over its entire duration and is therefore identifiable as a single step in the development of melody. By no means does the term refer to any graphic representation of sounds, as in modern languages.

psychology and rhetoric, perhaps reaching as far as the theory of acting and healing. I will label the former as ‘sounds outside’ and the latter as ‘sounds inside’.

## 1 Sounds Outside: Harmonics and Acoustics in Theophrastus’ Time

When presenting ancient harmonic science to non-specialist readers, it may be useful to clarify preliminarily the meaning of such words as *ἀρμονική* (*scil. τέχνη*), *ἀρμονία* and similar. To comprehend the ancient debate on harmonics, one needs to beware of anachronism and remember that these concepts have nothing to do with the constructions and combination of chords—which is what comes to mind when one thinks of modern harmony. Since ancient Greek music was almost exclusively monodic, the notion of ‘harmony’ entailed the study of the different intervals mostly in a *diachronic* perspective, i.e. in order to ascertain which notes were perceived as pleasant if heard after one another, or which ones could be arranged to form a scale, and for what reasons.<sup>3</sup> On the other hand, pairs of simultaneous notes were involved in a particular branch of harmonics, which is the study of concords (*sympḥōniai*; see also text 716).

By the time the young Theophrastus became acquainted with Aristotle and other thinkers such as Xenocrates and Speusippus,<sup>4</sup> the study of harmonics had reached a remarkable stage of development. The work of Philolaus of Croton (480?–399? BC), Archytas of Tarentum (435?–350? BC),<sup>5</sup> and Plato himself had greatly contributed to establishing a scientific approach that was based on the relation between musical intervals and mathematical ratios. Contrary to the common belief that the arithmetical approach to harmonics was intrinsic to Pythagoras’ doctrine, there is no decisive evidence to support the idea that mathematical speculation had prevailed against empirical observation as early as the beginnings of Pythagorean thought. Even the conviction that Pythagoras founded his theory of harmonic ratios on the usage of the monochord—once one of the best established ideas among the historians of ancient philosophy

3 This is no more than an outline; an excellent and enjoyable introduction to ancient harmonics is in Barker (2007) pp. 3–12; 19–30. I also allow myself to direct the reader to my chapter entitled “Measuring Musical Beauty: Instruments, Reason and Perception in Ancient Harmonics” in Taub, L. (ed.) *Cambridge Companion to Ancient Greek and Roman Science*, Cambridge: University Press (forthcoming).

4 FHS&G (1993) p. 1.

5 For further detail on the chronology of Philolaus and Archytas, see Huffman (1993) pp. 1–6 and (2005) pp. 5–6 respectively.

and science—has been recently challenged with solid reasons and is very likely to be an anachronism due to much later sources.<sup>6</sup> The basics of the treatment of intervals as ratios of numbers do not in fact presuppose any arbitrary numerological speculation on the part of the first Pythagorean; rather, they appear to be grounded in the observation of reality. The ratios of the fundamental intervals ( $2/1$  for the octave,  $3/2$  for the fifth,  $4/3$  for the fourth, and  $9/8$  for the tone) reflected the relations between the lengths of the strings—or the different parts of the same string, or the lengths of different pipes—that produced them. Likewise, there is no reason to believe that the conception of musical ratios (λόγοι) espoused by the early Pythagoreans was meant to be an exclusive alternative to that of musical intervals as linear “distances” (διαστήματα) between notes,<sup>7</sup> which is likely to have belonged to those theorists commonly referred to as οἱ ἁρμονικοί, and would eventually become a landmark, although with some conceptual differences, of the new theory set forth by Aristoxenus of Tarentum, a contemporary of Theophrastus.<sup>8</sup>

The set of doctrines that we usually group under the label of Pythagoreanism was far from monolithic at the dawn of the fourth century BC. Archytas of Tarentum, on the one hand, must have deemed the intervals of real music worth some attention, since he seems to have attempted to express them, as it were, in Pythagorean terms.<sup>9</sup> On the other hand, Plato apparently disagreed with Archytas’ views, to judge from his sarcastic remarks on empirical harmonics in the *Republic*<sup>10</sup> and, perhaps most importantly, from his ignoring Archytas’ intervallic patterns in his famous musical scale of the world’s soul in the *Timaeus*,<sup>11</sup> as if in his opinion Archytas’ harmonics depended too much on the mutability of perceptual data. Plato’s strong rejection of empiricism—in music theory as well as in astronomy—arguably determined a turning point among those intellectuals we usually refer to, perhaps too simplistically, as ‘the Pythagoreans’.<sup>12</sup>

6 See the groundbreaking monograph of David Creese (2010).

7 See, e.g., the interesting remarks by Andrew Barker (2007) pp. 264–271 on Philolaus’ fr. 6A Huffman; on Plato’s conception of intervals in the *Timaeus* see Barker (2007) p. 320 and Raffa (2013).

8 This usage derives from Aristoxenus, who clearly uses the term ἁρμονικοί to indicate his predecessors. An allusion to these empiricists and their way of investigating intervals is famously found in Plato (see n. 10 below); however, it seems that the rare occurrences of the term ἁρμονικός in Plato do not pick them out in particular.

9 See, e.g., Huffman (2005) pp. 412–414; Barker (2007) pp. 292–302.

10 Plato, *Republic* 530E.7–531C.4; useful commentary in Meriani (2003) pp. 83–113.

11 Huffman (2005) pp. 64; 87–88.

12 The notion of ‘Pythagoreanism’ covers in fact a diverse cultural object, both diachronically

There is no doubt that Plato's position played a crucial role in distancing mathematical harmonics from empirical enquiry—a process which would take place in the subsequent centuries—, and paved the way for the supremacy of the mathematical speculation that we find in many Middle- and Neoplatonic thinkers. However, the more empirical tendency represented by Archytas and (according to Andrew Barker's recent reading of the sources) Philolaus did not die out: it rather migrated, as it were, to the Peripatetic environment and particularly to the school of Aristoxenus (who was, perhaps not by chance, from Tarentum as well), where it reappeared with much stronger features. Although no explicit rejection of Pythagoreanism is to be found in Aristoxenus' extant work, the λόγος-based approach is simply deemed irrelevant for the purposes of harmonic science<sup>13</sup> and intervals are invariably treated as linear distances. This allows him to make use of such intervals as the half-tone and the quarter-tone, which would have been an impossibility if intervals were expressed as ratios.<sup>14</sup> One should not assume, however, that Aristoxenus' harmonics relied entirely on empiricism: methodological weakness is precisely what he often criticizes his predecessors for. Rather, the zeal that the Pythagoreans would devote to categorising ratios and accommodating their division of tetrachords to a given set of mathematical premises is redirected by Aristoxenus towards the creation of an axiomatic system that can account for the movement of melody and the significance of each note within the scale.<sup>15</sup> Such later theorists as Ptolemaïs, Didymus, Ptolemy and Porphyry portrayed the relationship between the Pythagoreans and the Aristoxenians, quite misleadingly, as an opposition

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and synchronically. On the one hand, it developed over a millennium, and later authors tend to project their own ideas back onto Pythagoras himself. On the other hand, even in the same period there was no such thing as a monolithic 'Pythagorean school'. We hear that in the early period there were at least three different groups with different interests and agendas: the *politikoi*, the *akousmatikoi* and the *mathēmatikoi* (see, e.g., Suda s.v. Πυθαγόρας, π 3124.99–101 Adler; *Scholia on Theocritus* 14.5B.4–7 Wendel = Anonymous of Photius p. 237.7–10 Thesleff).

13 Cf., e.g., Aristoxenus, *Elements of Harmonics* 2.32 pp. 41.13–42.7 Da Rios; see also Barker (2007) pp. 166–168.

14 Since taking away an interval from another equals dividing the corresponding ratios, in order to divide a 9/8 tone into halves one needs to extract the square root of 9/8, which leads to the irrational  $2\sqrt{2}$  (see, e.g., [Euclid], *Division of the Canon* pp. 152.1–153.4 Jan; pp. 161.17–162.12 Jan). If, on the other hand, the same interval is thought of as a distance between two points on a straight line, there is no conceptual objection left to dividing it into halves, quarters etc.

15 See, e.g., Brancacci (1984).

between the advocates of reason alone on the one side and of perception alone on the other, whereas the truth was much more complex: but expanding the topic would go well beyond the limits of the outline I intend to give here.<sup>16</sup>

Closely linked to harmonics was the study of the physical nature of sound. Although epic and archaic linguistic usage testifies to a generic conception of sound as something that can swiftly travel great distances,<sup>17</sup> no systematic enquiry into the constituents of sound seems to have been carried out until the fifth century BC. Once again, Archytas plays a key role as the first author known to us to have written on physical acoustics, albeit, apparently, as a preliminary stage to the treatment of harmonic theory.<sup>18</sup> Archytas' account of sound still retains some features of the pre-Platonic and pre-Aristotelian phases of the discipline; there is no distinction, for instance, between volume and pitch, higher sounds being associated with greater strength and speed and lower ones, *vice versa*, with lesser strength and speed<sup>19</sup>—a somehow naïve view, which would be corrected by Aristotle<sup>20</sup> and opposed by Theophrastus himself (see text 716). There is no need here to go through the subtleties; suffice it to notice that in Pythagorean acoustics, from its beginnings, pitch is thought to depend on those factors—strength and speed—that are measurable and can fit into the general theory of musical ratios.

Things get a bit more complicated if one goes into details and wonders what characteristics of sound exactly produced the numbers needed to determine those ratios. Answering this question involves the notion of “impact” or “blow” (πληγγή). From the earliest stages of Greek acoustics, it was clear and

16 For further detail see Raffa (2016a) pp. XIII–XIX.

17 See, e.g., Kaimio (1977) pp. 83–84, with several examples from the Homeric poems. Interestingly, at *Iliad* 4.125–126 λίγξε βιός, νευρή δὲ μέγ' ἴαχεν, ἄλτο δ' ὀϊστός | ὄξυβελῆς “the bow twanged, and the string sang aloud, and the keen arrow leapt” (tr. A.T. Murray) the verb λίγξε (*hapax*) may refer both to the sound produced by the bow and “the notions of flexibility and quickness” (see Kaimio 1977 p. 46).

18 See Huffman (2005) p. 30.

19 Archytas, fr. 1.18–20 Huffman; see, e.g., Gottschalk (1968) p. 440.

20 Aristotle, *On the Soul* 420A–B; *Topics* 160A.12–20. See Barker (1989) p. 41 n. 47–48. It is true, however, that pitch and loudness, although being conceptually distinct and depending on different parameters of sound waves—frequency and amplitude respectively—can interfere with each other under certain circumstances. It has been observed that an increase in loudness causes an increase in *perceived* pitch; the phenomenon peaks around 8,000 Hz, where a 10–Db increase in loudness corresponds to a 15% increase in perceived pitch, and tends to be irrelevant in the pitch range between 150 and 2,000 Hz. In other words, a sound, especially a high one, can be perceived as higher than its frequency really is, if it is emitted very loudly (see, e.g., Righini 1996 pp. 34; 50).

undisputed that sound comes as the result of a blow; what happens after that though, and how sounds reach the ear, was a matter of debate. On the one hand, the notion of sound travelling at different speeds depending on the pitch (so that the stronger the blow, the greater the speed, the higher the pitch and *vice versa*)<sup>21</sup> was liable to objections as it failed to explain why sounds of different pitches, produced simultaneously, were heard at the same time. On the other hand, the idea of a single initial blow could be consistent with the fact that the notes produced by plucked strings die out very quickly, but could hardly apply to *auloi* and wind instruments in general. These difficulties could be solved by a different theory, which was probably suggested by the observation of vibrating strings and was embraced, e.g., by Heraclides<sup>22</sup> as well as the author of the pseudo-Euclidean *Division of the Canon*;<sup>23</sup> it pictured sound as the result of a series of multiple impacts originating from a source and then travelling through a medium. The author of *Division of the Canon*, which was presumably written in the early third century BC,<sup>24</sup> establishes a precise relation between the frequency of the impacts and the pitch of the note (the more frequent or, as the text puts it, “the denser” the movements, the higher the note); whether such a relation had been already thought of in Theophrastus’ time is, however, far from clear. As for the work *On Audibles*, attempts have been made to include its author among the favourers of the frequency theory, but they have proven inconclusive;<sup>25</sup> on the other hand, the compiler of the pseudo-Aristotelian *Problems* does seem to conceive of multiple impacts affecting pitch.<sup>26</sup> What is

21 Cf., e.g., Plato, *Timaeus* 80A; Lazzeri (2010) p. 37, n. 10; Barker (1989) p. 62 n. 31.

22 Xenocrates, fr. 87 Isnardi Parente = Porphyry, *Commentary on Ptolemy’s Harmonics* pp. 36.9–38.10 Raffa = pp. 30.1–31.26 Düring. Unlike that recalled in the *Division of the Canon*, this acoustic theory does not seem to establish a direct relation between the plurality or frequency of the impacts and the pitch of notes; it only accounts for the fact that sounds are perceived as continuous in spite of their resulting from a series of distinct *πληγαι*, on the grounds that the ear is incapable of perceiving the tiny instants between each impact and the next one. Porphyry is quoting here from Heraclides’ *Introduction to Music* (*Μουσική εισαγωγή*), but the text does not make it clear if the theory is to be attributed to Pythagoras, Xenocrates or Heraclides himself (see also Meriani 1995 pp. 77–80).

23 See [Euclid], *Division of the Canon* p. 148.9–11 Jan.

24 See, e.g., Barker (2007) pp. 364–370. On the authorship of the treatise see Creese (2010) pp. 132–134.

25 Gottschalk (1968); *contra*, Barker (1989) p. 107 n. 40.

26 On higher sounds produced by more frequent impacts, [Aristotle], *Problems* 11.19 (901A.15–17); commentary in Barker (1989) p. 89 n. 30; on the frequency of the impacts accounting for the pleasantness of the octave, [Aristotle], *Problems* 19.39 (921A.7–31); commentary in Barker (1989) pp. 94–95 n. 64.



relevant to our discussion, however, is that this theory as a whole was undoubtedly a quantitative one. This will turn out to be of crucial importance as we discuss Theophrastus' views on this matter, for he is radically critical of any quantitative approach to acoustics and, as a consequence, to harmonics. As we will see when we discuss the long fragment from his work *On Music* (text 716), his way of accounting for the relationships between notes does not rely on numbers or quantities, but rather on the notions of their "power" (δύναμις) and "peculiar quality" (ιδιότης). That fragment offers no more than a glimpse of his views on this particular issue, but if we consider Plutarch's inclusion of a speech on concords by Theophrastus in a fictitious list of discourses on musical topics given by illustrious figures<sup>27</sup> we can imagine that his position must have been well known in antiquity.

Harmonics as a whole would prove one of the most fruitful provinces of ancient Greek thought. On the one hand, the mathematical approach fuelled the development of mathematics, philosophy, perhaps even theology, and provided a conceptual basis for one of the most important and long-lasting intellectual constructions of our civilisation—the idea of cosmic harmony and the belief in an underlying order common to the movements of heavenly bodies, the ruling of political communities and the individual cosmos of the human soul. On the other hand, the approach that we may call 'Aristoxenian' paved the way for the acknowledgement of music as a discipline of its own, possessing its own aesthetics, rules, and criteria of beauty; it is in this respect that Aristoxenus has been regarded as the first musicologist.<sup>28</sup>

From a modern standpoint, however, it is striking how ancient thought on music overlooked if not ignored some crucial aspects of musical experience, the most important of which was surely timbre—the unique set of characteristics that make the sound of a particular instrument, or voice, distinguishable from any other. Timbre is relevant to music in a different way than intervals and scales are. While the latter convey the structure of a melody or a piece of music—its skeleton, as it were—, timbre can be thought of as its flesh and skin. It carries its own meaning and evocative power, which cannot be reduced to the intervallic patterns of the melody. The same melody would not have stirred the same emotions if played on the *aulos*<sup>29</sup> instead of the *kithara*, in the same

27 See text 715.

28 See Gibson (2005).

29 I will only transliterate the Greek αὐλός because no modern word can convey its meaning faithfully. The old habit of rendering it with 'flute' is misleading: the *aulos* was a double-reed instrument and its timbre was utterly different from that of a modern flute. To get a better idea, one should rather compare it to an oboe or perhaps a cor anglais, but even

way as the opening of Beethoven's *Eroica Symphony* would have had an utterly different effect had the main theme been assigned, for instance, to flutes and oboes instead of cellos and double basses. Mainly, if not exclusively, because of the strongly anti-empirical direction that Plato impressed on the mathematical approach, the study of harmonics ended up, paradoxically, doing without sounds—the very physical objects of the sense of hearing. In order to build a scalar system by dividing a fourth into a specific tetrachord, theorists did not need to take into account whether notes were to be sung or played, and, in the latter case, on what instrument; for them, notes were just theoretical entities between which to establish correct arithmetical relations according to certain principles. There were reasons for this disregard of timbre and, in general, of the bodily features of sound. Firstly, the characteristics of an audible object and whether it is—or rather sounds—rough or smooth, cold or warm, thin or thick, do not lend themselves to any rigorous description, let alone measurement; in fact, even for modern languages, any attempt to clarify them cannot avoid making use of expressions involving synaesthesia. Secondly, the vocabulary of harmonics shows, from its earliest stages, that the discipline was shaped by the observation of strings. Suffice it to recall, for instance, that the ancient names of the fourth and the fifth, συλλαβή and δι' ὀξειάν respectively, are very likely to have their roots in the jargon of archaic lyre-playing;<sup>30</sup> and the words τόνος and τάσις refer to the act of τείνειν, increasing the tension of a string to produce a higher note. Moreover, acoustic experiments with strings allowed theorists to immediately visualize intervals as ratios between linear lengths, while such an abstraction was much more difficult with pipes—which were considered absolutely unreliable for these purposes because not only was it hard to find the points from which lengths could be exactly measured, but also pitch could vary during the emission of sound.<sup>31</sup> Now, ancient chordophones must have had quite a poor timbric range: their sound was naturally short-lived, nor was it possible to perform any sort of *legato* or to modify the volume of a note once its string had been plucked. No wonder, therefore, that the Pythagorean approach

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this comparison would be off the mark, for ancient *auloi* were usually played in pairs by the same player. This means, on the one hand, that it was possible to play two different melodic lines at the same time, and, on the other hand, that each pipe could be operated with five fingers only. There is no instrument comparable to this in modern classical music; however, some double-pipe woodwinds are still used in the traditional music of the Mediterranean area (e.g. the *mijwiz* or the *arghoul* in Northern Africa, the *benas* and the *launeddas* in Sardinia).

30 See below and text 717.

31 See, e.g., Plato, *Philebus* 56A.3–7; Ptolemy, *Harmonics* 1.8 pp. 16.32–17.7 Düring.

ignored the timbric dimension of sound. On the other hand, Aristoxenus and his followers did not pay any more attention to it either, their ‘empiricism’ being directed, as we have seen, towards the making and functioning of melodies.

## 2 Sounds Inside: Qualities, Affections, and the Soul

So far we have seen how musical sounds were conceived of as objects of observation external to the self. As is well known, however, another trend of seminal importance in ancient thought concerns the relationship between musical structures and the human soul. Once again, Plato’s work is a turning-point. He took up—most probably through Damon of Oa<sup>32</sup>—the so-called doctrine of musical *êthos*, which is, basically, the idea that music can shape people’s character and induce, either temporarily or permanently, attitudes that the soul would not acquire otherwise. There is no room here for a full account of *êthos*-theory in Plato’s writings, nor is it necessary since the issue has been given plenty of discussion, with excellent results;<sup>33</sup> only a few points will need to be recalled, for they allow us to better place Theophrastus’ ideas in context. Plato holds that music can exert an influence on human beings because its movements are “akin” (συγγενεῖς) to those of the soul.<sup>34</sup> The idea that music can restore the movements of the soul to their original condition if they have been altered for some reason and, accordingly, that it can have both psychotherapeutic and educational powers, is consistent with this assumption. Aristotle was to share basically the same view, with the important difference that he granted genuine value to effects of music other than education—such as entertainment, the creation of good character, and the stirring of emotions—whose value to human life had been left aside by Plato.<sup>35</sup> All these views, which also appear in texts 720, 721A, 721B, clearly rely on the idea that music consists of some kind of movement (φoρά, κίνησις). The unknown author of Section 19 of the pseudo-Aristotelian *Problems* seems to have gone even further, suggesting—if Andrew Barker’s thought-provoking reading of the text holds water, as I think it does—that, of all perceptible objects, only melodies are capable of imitating actions because they are somehow ‘actions’ themselves and unfold through time, just as actions do.<sup>36</sup>

32 On the relationship between Damon and Plato see now Wallace (2015) pp. XIX–XXIII.

33 See, e.g., Barker (2005); Pelosi (2010).

34 See, e.g., Plato, *Timaeus* 47C.6–E.2; Barker (2005) pp. 123–124.

35 See Barker (2005) pp. 99–111.

36 [Aristotle], *Problems* 19.27 919B.26–37.

At this stage of our discussion, it should be noticed that the views we have recalled, for all their differences, have at least one point in common: they conceive of the movement of music as something that comes from the external world and operates on the soul because of its alleged likeness, kinship, or similarity with it, but still from outside. However, there was another side to the coin. Since the melodies that people could hear in their everyday experience did not come from another world, but were composed—whatever meaning we attach to the idea of ‘composing’ (ποιεῖν) in ancient Greek culture—and performed by humans for humans, one might well have wondered how these melodies came into being; whether they originated from some source situated in our souls; what made people sing or play melodies; and finally, what happened to their souls when they did. Quite oddly, philosophers and theorists seem to have largely neglected these questions; however, as early as the heart of the classical period we find traces of the idea that the soul somehow produces effects on the music it generates. Let us consider the view attributed to Damon of Oa and his school—or to his followers only<sup>37</sup>—in a passage from Athenaeus’ *The Sophists at Dinner*: οὐ κακῶς δ’ ἔλεγον οἱ περὶ Δάμωνα τὸν Ἀθηναῖον ὅτι καὶ τὰς ᾠδὰς καὶ τὰς ὀρχήσεις ἀνάγκη γίνεσθαι κινουμένης πως τῆς ψυχῆς, καὶ αἱ μὲν ἐλευθέριοι καὶ καλαὶ ποιοῦσι τοιαύτας, αἱ δ’ ἐναντίαι τὰς ἐναντίας.<sup>38</sup> Because of its alleged syntactical ambiguity,<sup>39</sup> the passage has been taken as meaning either that noble songs and dances produce noble souls, or the other way around, i.e. that noble souls produce noble songs and dances.<sup>40</sup> I would rather argue that the latter is not only preferable, but it is also the sole possible interpretation.

My first reason for thinking so is a syntactical one. The rendition of the Greek ἀνάγκη (*scil.* ἐστὶ) ... τὰς ᾠδὰς καὶ τὰς ὀρχήσεις γίνεσθαι κινουμένης πως τῆς ψυχῆς in the sense of “it is necessary that song and dances *entail* (or ‘require’,

37 The expression οἱ περὶ Δάμωνα has been taken as meaning either “Damon and his followers” or “Damon’s followers (only)”. References to the scholars who espoused either view are found in Wallace (2015) pp. 170–171. Wallace himself prefers the latter, while I would rather suspend judgment. On Damon’s disciples and followers see Wallace (2015) pp. 8–13.

38 Damon, fr. 37 B 6 Diels-Kranz *ap.* Athenaeus, *The Sophists at Dinner* 14.25.4–6 628C (= test. C 1 Wallace).

39 Which has been already noticed by Barker (1984) p. 187 n. 10 and now Wallace (2015) p. 170.

40 The former interpretation is espoused, e.g., by Anderson (1966) p. 39 (“Song and dance necessarily arise when the soul is in some way moved; liberal and beautiful songs and dances create a similar soul, and the reverse kind create a reverse kind of soul”) and Brancacci (2008) p. 27 (“Non a torto diceva Damone ateniese che necessariamente i canti e le danze implicano un certo moto dell’anima, e che i canti e le danze liberi e belli rendono tali le anime, mentre quelli contrari rendono contrarie anche le anime”). The latter has been endorsed by Barker (1984) p. 187 and, recently, Wallace (2015) p. 170.

or ‘postulate’) such-and-such movement of the soul”<sup>41</sup> seems to me not to do justice either to the natural meaning of γίγνομαι (“to become”, to “to come into being”) or to the value of the absolute genitive κινουμένης ... τῆς ψυχῆς. I would rather take the phrase as meaning that songs and dances come necessarily into being *when, if or because* the soul *moves* (or, even better, *is put in motion*) in a certain way. In light of this, the interchangeability of subject and object in the latter sentence is no longer possible: one must necessarily assume that the adjectives ἐλευθέροι καὶ καλαί refer to αἱ ψυχαί, while the pronoun τοιαύτας and the adjective ἐναντίας refer to τὰς ᾧδὰς καὶ τὰς ὀρχήσεις.<sup>42</sup> I therefore agree with Wallace’s translation, which I print here: “The followers of Damon the Athenian have not badly said that songs and dances must result when the soul is moved in certain ways: souls that are fair and characteristic of free men create songs and dances of the same kind, while the opposite create the opposite”. In other words, for a song or dance to take place, there has to be a soul that has been subjected to some kind of movement—whose soul, we will discuss in due course; and it is the *êthos* of the soul that is said to effect (and affect) music, not the other way around.

The second reason has to do with the context in which the passage is placed. It precedes immediately the famous anecdote of Cleisthenes, the tyrant of Sicyon, who, having seen one of his daughter’s suitors (namely Hippoclide the Athenian) dance unbecomingly, told him that he had just “danced away” his marriage (ἀπωρχήσθαι τὸν γάμον) and turned him down, Athenaeus adds, because he thought it likely that the soul of the man was as indecorous as his dance (γάμον αὐτὸν ἔφησεν, νομίζων ὡς ἔοικεν καὶ τὴν ψυχὴν τάνδρὸς εἶναι τοιαύτην).<sup>43</sup> In this story it is evidently the soul of the performer that produces—or

41 Thus Brancacci, see previous note.

42 If the absolute genitive is taken in a causal, temporal or hypothetical sense, then maintaining that ἐλεύθεροι καὶ καλαί go with ᾧδαι καὶ ὀρχήσεις leads to a logical impossibility. This is the case, in my opinion, with Ch. Burton Gulick’s translation for the Loeb Classical Library: “With good reason Damon of Athens and his school say that songs and dances are the result of the soul’s being in a kind of motion; those songs which are noble and beautiful produce noble and beautiful souls, whereas the contrary kind produce the contrary” (Athenaeus, *The Deipnosophists*, Cambridge, MA: Harvard University Press 1937, vol. 6 p. 389): if the soul is the cause and songs and dance are the effect, how the effect can produce the cause remains obscure. The same solution is adopted by L. Citelli in Canfora (2001) vol. 3 pp. 1621–1622, but in this case the translator is aware of the difficulty and adds that according to Damon the influence between the soul and music is mutual (“l’influenza è insomma reciproca, secondo Damone”, *ibid.* p. 1622 n. 1).

43 Athenaeus, *The Sophists at Dinner* 14.25.8–14 628C–D. A more detailed version of the same anecdote is found in *Histories* 6.129.

is thought to produce—effects on the performance, and not the opposite. That Athenaeus himself wanted to convey this idea rather than the other one is also shown, in my view, by the fact that he presents the anecdote of Cleisthenes *as a proof* of the statement attributed to Damon and his followers (ὅθεν καὶ τὸ Κλεοσθένους τοῦ Σικυωνίου κτλ.).

If read in this way, the Damonian testimony stirs up some intriguing questions that cannot be answered here, but are worth posing anyway. One might wonder, to begin with, what is meant here exactly by γίνεσθαι, “coming into being”. If the verb refers to the composition of music which did not exist before, we should infer that the *êthos* of the composer’s soul was thought to leave its mark on the melodies and dances it created. If this is the case, *êthos* is supposed to remain the same even if that particular melody is performed by a musician other than its ‘composer’ and possessing a different *êthos*, perhaps worse—less liberal or noble, for instance. The inescapable conclusion is, then, that the *êthos* must lie in those features that are not altered when the same melody is performed by different individuals: its structure, its intervallic and rhythmic patterns—in other words, all the features that make a specific melody distinguishable from any other (in the case of dance, its peculiar moves, steps and figures). Alternatively, a less strict version of this interpretation might take into account the fact that the meaning attached by the ancient Greeks to the notions of ‘musical composition’ and ‘originality’ was quite different from ours. As we can infer from what survived of ancient writings in musical history—the best example is the pseudo-Plutarchan dialogue *On Music*—there was no sharp distinction between the composer and the performer; it seems that in the archaic period, and for the better part of the classical one, the musician was allowed a certain degree of innovation of his own, provided that his music maintained those melodic, rhythmic and textural features that could make it recognisable as belonging to this or that traditional pattern—the so-called *nomoi*. In this case, we could assume that a particular *êthos* had been impressed on a particular *nomos* by the soul of its composer. But we do not really need get tangled up in these subtleties. However strictly we interpret the notion of ‘composition’ here, this reading of the passage implies that the character of a melody depends on the intervals, pitches and rhythms that go into its creation.

On the other hand, if we understand γίνεσθαι simply as ‘being performed’, regardless of whether the melody already existed or not, we need to assume that the same melody can acquire different *êthê* at the hands of different performers. In this case, the *êthos* cannot lie in the formal features of the melody; rather, it should be sought in the way in which songs or dances are performed. With the latter interpretation we have left the realm of formalism and entered that of performance—that complex area covering music, acting and rhetoric

which the Greeks referred to as ὑποκριτική. The theme is touched upon by the compiler of the pseudo-Plutarchan *On Music* in a quite cryptic passage coming, in all likelihood, from Aristoxenus and echoing Platonic doctrines,<sup>44</sup> where the *êthos* of the composition and that of the performance are distinguished from one another and the evaluation of whether the performer has been faithful to the proper *êthos* of the composition or not is a matter for the highest form of judgment.<sup>45</sup> It is hardly surprising that, with the rise of musical professionalism in the late v century, the debate on what makes a 'good' performance included an assessment of the theatrical demeanour displayed by musicians, especially *aulos*-players. Aristotle criticizes those auletes who indulged in excessive gesturing while playing;<sup>46</sup> and, as we will see, Theophrastus' interest in the interweaving of musical expression and bodily movements—as shown, for instance, in his account of the performative style of the aulete Andron of Catania,<sup>47</sup> or in the connection he makes between the movements of voice, body and soul<sup>48</sup>—can be regarded as a development of the line of thought we have seen, at a quite embryonic stage, in the fragment of Damon.

In whatever way one decides to construe the notion of 'composer' and 'performer', my reading of the Damonian fragment leads to another problem. There is no doubt that Plato knew Damon's work;<sup>49</sup> he features as an authority on musical matters in several passages of Plato's dialogues, among which the most relevant to our discussion are those from the *Republic*.<sup>50</sup> How are we to account, therefore, for the fact that Plato mentions Damon in connection with the view that melodies and rhythms can affect the soul,<sup>51</sup> while the opposite case is not taken into account? The most straightforward solution would be to deny credibility to Athenaeus' testimony on the grounds that the views attributed to Damon are anachronistic. Andrew Barker,<sup>52</sup> for instance, argued that the doctrines presented here as Damonian should be assigned more reasonably to the iv rather than the v cent. BC; and of course he might be right. On the other

44 Barker (1989) p. 238 n. 210.

45 [Plutarch], *On Music* 36 1144C–E; Plato, *Laws* 700A.

46 See, e.g., Aristotle, *Poetics* 1461B.

47 See text 718.

48 See text 721B.

49 On the presence of Damonian doctrines in Plato's dialogues, see Brancacci (2008) pp. 21–33 (on the *Protagoras*).

50 Plato, *Republic* 400B; 424C. Damon's skills as a musician and a sophist in general are also praised at *Laches* 180C–D; 197D; 200A–B.

51 See, e.g., Pelosi (2010) pp. 29–30.

52 Barker (2005) p. 71.

hand, Plato is not new to drawing upon his sources quite selectively, according to his personal tastes and ideological commitments. As we have recalled above, the *Timaeus* does not mention any of the divisions of the tetrachord proposed by Archytas; yet we do not doubt the account of them that we read in Ptolemy's *Harmonics*.<sup>53</sup> I would therefore suggest that Athenaeus' testimony is trustworthy; but if this is the case, we cannot but conclude that Plato deliberately took up the one side of Damon's views and ignored the other.

Why did he do so? The most immediate answer is that since his main interest was in the educational usages of music, it is no surprise that he focused on the effects of music on the soul and not *vice versa*. But I think there is more—and the point is worth elaborating as it may have bearings on our understanding of Theophrastus' thought. Although we do not have any evidence for the theory of *êthos* being challenged as early as Damon's time—the earliest document of the anti-*êthos* position is the fragment of a speech preserved in the Hibeh Papyrus 13, which is unlikely to predate IV cent. BC<sup>54</sup>—and although Damon was probably one of its strongest champions in pre-Platonic thought, it should be noted that the view expressed in our Damonian fragment, were it to be taken to its extreme consequences, could seriously undermine the theory itself; for if the genesis of music lies inside the soul, how can music be used to shape or educate the soul itself? and, if we follow the latter interpretation of γίνεσθαι—that is, if the character of a melody depends on the way in which it is performed—what would be the point of strictly regulating which *harmoniai* are to be admitted into the city, since it would take no more than a bad-souled performer to turn a “good” piece of music into a dangerous source of moral corruption? I am not implying, by any means, that Damon had any sense of this potential tension in his thought—there is no evidence that he did, and chances are that he did not. What I am suggesting, instead, is that Plato did, which may account for his silence on this aspect of Damon's doctrine.<sup>55</sup> Moreover, it is not by chance, in my view, that Theophrastus, who focuses on the movements of the soul as it produces music,<sup>56</sup> seems not to share Plato's belief that music can

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53 Ptolemy, *Harmonics* 1.13.

54 On the Hibeh Papyrus see Barker (1984) pp. 182–185; West (1992) pp. 16–23; Brancacci (1988); Avezzù (1994); Lapini (1994).

55 As pointed out by Anderson (1966) pp. 77–79, there are other issues on which Plato silently disagree with Damon. One might recall, for instance, the so-called ‘relaxed Lydian’ scale, which had been reportedly invented by Damon (according to [Plutarch], *On Music* 16 1136E), but which is implicitly banned by Plato from his ideal city.

56 See texts 716; 721B.



actually shape and improve character;<sup>57</sup> it has been noticed, in fact, that his attitude towards the *êthos*-theory is dismissive, to say the least.<sup>58</sup>

Aristotle also seems to have been silent on the role of the soul as an active factor in the making of music. However, some signs of a change of perspective can perhaps be seen in some Peripatetic writings coeval with Theophrastus. In the pseudo-Aristotelian treatise *On Audibles* a specific interest is shown in how different conditions of the vocal apparatus can affect the quality of sound. We are told, for example, that people whose windpipe is too large cannot hold together the sounds they produce, which are, as a result, “hollow and unfocussed”; that people with uneven windpipes encounter many difficulties in uttering sounds; that the same happens to those who are drunk or suffer from catarrh, because of the excessive humidity in their lungs;<sup>59</sup> and so on. Now, if bodily conditions affect sound, and emotional states affect bodily conditions, it follows that the conditions of the soul can affect, through the body, the sounds that are being uttered. No such train of thought is explicitly articulated anywhere in Greek sources, at least to my knowledge; however, we have come across some views that might have paved the way for it. The compiler of the pseudo-Aristotelian *Problems* tells us that those who weep utter higher sounds than those who laugh;<sup>60</sup> those who are afraid utter higher sounds than those who are worried;<sup>61</sup> and so on. It is certainly true that there is no specific reference to musical sounds in these passages; however, if we widen our reading of the sources so as to include Aristoxenus’ view that affections can make our voice pass from the continuous mode to the intervallic one—which amounts to turning our speaking into singing<sup>62</sup>—we might suggest that in post-Aristotelian thought the point is made—and one grounded in physical acoustics, insofar as the speed of air is involved—that some emotional states, such as being worried, afraid, weeping or laughing, do have bearings on the sounds that are given off and can make the difference between a spoken and a sung utterance. This view, which is based on the notions of κίνησις, “movement”, and πάθος, “affection”, appears to be shared by Theophrastus, but with a specific

57 See texts 720; 724.

58 See, e.g., Barker (2005) pp. 131–133.

59 [Aristotle], *On Audibles* 800B–801A.

60 [Aristotle], *Problems* 11.13 900A.16–25.

61 [Aristotle], *Problems* 11.32 902B.29–903A.5; 11.53 905A.4–12. The same idea is also found in Theophrastus, see text 718.

62 Aristoxenus, *Elements of Harmonics* 1.9.30–32 p. 14.17–19 Da Rios. Unlike Laloy and Da Rios, and following Barker (1989) p. 133 n. 39; (2005) p. 133, I take Aristoxenus’ expression διὰ πάθος as meaning “due to some affection” rather than “by accident”.

emphasis on the creation of music (text 719A). The following step—that of investigating how the movement of the soul gives birth to music or, in other words, what pushes people towards singing and playing—had yet to be taken up. As we will see in our discussion of the texts, that was the most challenging task that Theophrastus chose for himself.

### 3 Theophrastus' Thought on Music in Context

Now that the state of the debate on music in our philosopher's time has been outlined, we can focus on his own contributions to its development as they appear from the material at our disposal. If we maintain the outside-*vs.*-inside plan we have been using so far, we might start from Theophrastus' relationship to Pythagorean harmonics. Although we can imagine that, given his philosophical background, he must have been fairly aware of those doctrines, no original contribution on his part is recorded anywhere in ancient sources with reference to such matters as the division of the tetrachord, the correct way of measuring concords and intervals, and similar topics that would interest the followers of the Pythagorean school. On the only occasion on which he is somehow presented as an authority on musical concords—that is, in the fictional banquet pictured by Plutarch in which Theophrastus himself and Aristoxenus are imagined to give speeches on music (text 715)—there is no hint as to the angle from which he would be expected to address the issue. However, his remarks on the ancient Pythagorean names of the concords in text 717—συλλαβή for the fourth, δι' ὀξεῖαν for the fifth and ἁρμονία for the octave—might be of some relevance to the matter at hand.<sup>63</sup> Even if we are told that these denominations are Pythagorean, nothing suggests that the phrase occurred in the context of a treatment of concords in Pythagorean—i.e. mathematical or 'rational'—terms. Indeed, as I said earlier, such denominations are almost certainly rooted in the language of practical musicians and, as Andrew Barker has argued, have little or nothing to do with the 'size' of the intervals.<sup>64</sup>

In addition to Barker's convincing arguments, I want to point out that, unlike their more recent counterparts διὰ τεσσάρων and διὰ πέντε, they do not imply any counting of the notes or strings that the intervals encompass, let alone a theoretical account of the structure of the octave. If we assume, for instance,

63 The textual aspects of the fragment will be discussed in due course. Suffice it to say here that in my view Theophrastus' quotation should be limited to the words about the octave being called ἁρμονία because of its being a composite interval, i.e. a σύστημα.

64 Barker (2007) pp. 264–271.

that the scales described by Aristides Quintilianus as those referred to by Plato in the *Republic* are authentic,<sup>65</sup> or at least bear some resemblance to what an archaic scale must have sounded like, we might notice that such names as διὰ τεσσάρων and διὰ πέντε would hardly befit them, because in some cases the intervals of fourth and fifth encompass more or less than four and five strings (or notes) respectively; whereas the older names would do the job perfectly. In Aristides' Lydian, for instance, the lower fourth—a diminished one—spans three notes only (B+, c, e);<sup>66</sup> in the Mixolydian scale, which covers an octave, the lower fourth encompasses as many as five notes (B, B+, c, d, e), whereas the upper fifth encompasses only four (e, e+, f, b).

In other words, the older names seem to imply that each scale had a sort of “lower region”, roughly encompassing a fourth but not necessarily made of four different notes, which corresponded to the basic position of the player's hand (συλλαβή); and a higher region to which the hand moved, when required by the melody, through the higher strings (δι' ὀξεῖαν). The whole scale, which did not necessarily span an octave, at least judging from the specimens given by Aristides Quintilianus, resulted from the connection (ἄρμονία or σύστημα) of the former and the latter.<sup>67</sup> Despite Porphyry's claim that these ancient denominations of the intervals are Pythagorean, they appear to be perfectly compatible with pre-Socratic thought in general, nor do they show any quality that makes them necessarily Pythagorean.<sup>68</sup> But as the octave became the standard extension of a musical scale and thinkers interested in such matters—probably the Pythagoreans, and most probably Philolaus—set out to account for its structure, it stands to reason that the newer denominations coexisted with the older ones for a while and eventually replaced them. Now, especially if the whole sentence quoted by Porphyry is Theophrastean, we might suggest that the aspects of Pythagoreanism that most attracted our philosopher's attention were its early steps—i.e. that stage at which mathematical speculation had not yet overcome the observation of reality. Theophrastus was certainly aware of the mathematical approach, but his main goal seems to have been to point out its weak spots and undermine the quantitative premises on which it relied.<sup>69</sup>

65 Aristides Quintilianus, *On Music* 1.9 p. 19 Winnington-Ingram. See, e.g., Hagel (2009) pp. 390–393.

66 The symbol ‘+’ indicates that the note is a quarter tone higher.

67 On the musical sense of σύστημα see also Commentary on text 717.

68 These names also occur in a very interesting passage from the Hippocratic treatise *De victu* (1.8.2); see Barker (2005) p. 91 n. 8.

69 See text 716.

There is also another respect in which Theophrastus seems to look at the non-Platonic or perhaps pre-Platonic side, as it were, of Pythagoreanism: his belief that music possessed healing powers.<sup>70</sup> That early Pythagoreans thought music could cure states of mental alteration and emotional distress was well known to ancient thinkers in general and Peripatetic theorists in particular: Aristoxenus defined this alleged power of music, perhaps borrowing the term from Aristotle, as *κάθαρσις*, specifying that they conceived of music as a cure for the soul and medicine for the body.<sup>71</sup> Some anecdotes about this topic circulated in ancient sources, the most famous of which can be read in chapter 25 of Iamblichus' *Life of Pythagoras*. We are told that the philosopher managed to keep a drunken young man from setting fire to the house of his rival in love by simply having the *aulos*-player change his melody from the Phrygian one that had exacerbated the man's rage into a libation tune (*σπονδειακόν*). The same source also reports a very similar story featuring Empedocles as the player who managed to prevent the killing of a man called Anchytus at the hands of another angry youngster by changing the attunement of his lyre and singing the Homeric verses on that famous drug of Helen's that was capable of "quieting all pain and strife, and bringing forgetfulness of every ill" (*Odyssey* 4.219–226). Other anecdotes of the same sort are found, for instance, in Cicero (*On his own Decisions* fr. 2 Orelli), Boethius (*On Music* 1.1, p. 185 Friedlein), Quintilian (*Principles of Oratory* 1.10.32), Galen (*On the Doctrines of Hippocrates and Plato* 5.6.21–22) and Martianus Capella (*On the Marriage of Philology and Mercury* 9.926).

These accounts should not be taken as reliable documents of early Pythagoreanism, for two reasons. First of all, the anecdote of the drunken man is referred to Pythagoras in Iamblichus' and Quintilian's versions, and to Damon in Galen's and Martianus'—Erwin Rohde's claim that the latter must be the original one<sup>72</sup> is no more than speculation and can be easily reversed. What we can say with some confidence is that this episode contains all the typical ingredients of a propagandistic concoction—a dramatic situation, the sudden

70 Plato and his disciples do not seem particularly interested in the therapeutic applications of music; one exception is perhaps Xenocrates, who is reported by Martianus Capella, *On the Marriage of Philology and Mercury* 9.926 to have cured hysteria with instrumental melodies (*organicis modulis*); however, the testimony is isolated and is also a much later than Xenocrates (Martianus flourished in the v cent. AD).

71 Aristoxenus, fr. 26 Wehrli ὅτι οἱ Πυθαγορικοί, ὡς ἔφη Ἀριστόξενος, καθάρσει ἐχρῶντο τοῦ μὲν σώματος διὰ τῆς λατρικῆς, τῆς δὲ ψυχῆς διὰ τῆς μουσικῆς. A thorough discussion of the fragment and the relevant secondary literature is provided by Provenza (2016) pp. 122–124.

72 Quoted by Giangiulio (1991) p. 257 n. 112. On these anecdotes see now Provenza (2016) pp. 132–139; on music as a means for correcting *êthos* in general, pp. 142–147.

intervention of the sage, the rapid disappearance of anger, the happy ending; moreover, in the case of Empedocles recalled by Iamblichus, the story ends up in philosophical proselytism, since the would-be murderer is said to have become thereafter “the most esteemed disciple of Empedocles’”. Secondly, Iamblichus’ chapter is itself suspect in many ways. The claim that the Pythagoreans rejected the *aulos* as the accompanying instrument for their dances, on the grounds that it was “wanton, ostentatious and its sound was by no means worthy of a free man” (ὕβριστικόν τε καὶ πανουργικὸν καὶ οὐδαμῶς ἐλευθέριον τὸν ἥχον ἔχειν) is extremely unlikely to reflect either Pythagoras’ or his early followers’ genuine attitude towards this instrument.<sup>73</sup> Such a remark seems rather to echo the v–iv century BC polemic against the so-called “New Music”, when conservative writers and playwrights held auletic music responsible for the corruption of the noble and old tradition of Hellenic music. The tendency to read earlier Greek musical history anachronistically in the light of that polemic is quite common among the intellectuals of both the ‘conservative’ and the ‘progressive’ parties of that time, as Andrew Barker has recently pointed out.<sup>74</sup>

These few remarks are meant to show that we cannot grant full reliability to such accounts; however, whether or not psychotherapeutic usages of music were really part of the earliest bulk of Pythagorean doctrines, what is relevant to my argument is that in antiquity, and probably as early as Theophrastus’ time, they were *perceived* in that way. One might wonder if, because of the rise of a more mathematical or, broadly speaking, theoretical mindset within the school, the idea of music as a drug to cure temporary affections such as violent outbursts of anger was relegated to the rank of a foolish superstition; however, no Pythagorean with a definite historical profile—such as Philolaus or Archytas—seems to figure in any anecdote of this sort. Now, if we look at the views with which Theophrastus is credited by Apollonius, Athenaeus and Gellius,<sup>75</sup> we have perhaps one more reason to believe that he intended to bypass the mathematical core, as it were, of Pythagoreanism and root his own thought into an earlier stage of its development.<sup>76</sup>

73 There is in fact no reason to believe that vi- and early v-century Pythagoreans had anything against the *aulos*; indeed, recent research has suggested that the first attempt made by a thinker labeled as ‘Pythagorean’, Archytas of Tarentum, to express the structure of tetrachords through mathematical ratios, depends on the tuning of the *auloi* rather than lyres (Hagel 2009 pp. 171–182). See also commentary on texts 726A–C.

74 Barker (2014) pp. 89–102.

75 Texts 726A–C.

76 Provenza (2016) pp. 24–25 is right, I believe, in arguing that the idea of musical *katharsis* predates Plato’s espousal of Pythagoreanism.

What is left now is to take note of Theophrastus' relationship with the other great musicologist of the Aristotelian school, Aristoxenus of Tarentum.<sup>77</sup> Although they must have known each other's work, Theophrastus is never mentioned in Aristoxenus' extant writings; on the other hand, Aristoxenus' name does appear, though only once, in Theophrastus' texts on music, namely in relation to the story of the Theban who could not stand the sound of the trumpet.<sup>78</sup> We should not, however, construe this fact as hinting at any sort of polemic between the two thinkers, since their views on music, as far as we can see, are not at all incompatible with each other. They both show an interest in the history of music and musicians, although Aristoxenus developed a pessimistic attitude towards the music of his time in comparison to the dignified and noble style of archaic musicians<sup>79</sup>—an attitude that seems not to have been shared by Theophrastus. On the other hand, as far as music theory is concerned, Theophrastus' rejection of number-based harmonics<sup>80</sup> does not conflict with Aristoxenus' dismissal of it (see above). The only passage in our philosopher's extant writings that has been interpreted as an anti-Aristoxenian argument is his claim that intervals (διαστήματα) do not cause pitch differences between notes;<sup>81</sup> however, after Andrew Barker's recent reading of the fragment, little doubt remains that Theophrastus' polemic was aimed at empiricists other than Aristoxenus, the so-called ἄρμονικοί also criticized by Plato in the *Republic* (see above).<sup>82</sup>

There is a notion that seems to be placed at the very heart of both Aristoxenus' and Theophrastus' theories on music, although in very different ways: that of κίνησις, "movement". As is well known, Aristoxenus speaks of two kinds of movement of the voice, the continuous one (φωνή συνεχής or λογική, since it is used in ordinary speech), in which sound does not maintain a stable pitch for long enough to be identified as a "note" (φθόγγος), and the intervallic one (φωνή διαστηματική), which consists in a succession of notes clearly distinguishable from one another—it is the latter, of course, which is the object of harmonic science.<sup>83</sup> The idea of movement seems to be also presupposed by some of the

77 A useful account of the relationship between the two philosophers' thoughts on music is also found in Fatuzzo (2009) pp. 33–39.

78 Text 726A.

79 See, e.g., Meriani (2003 pp. 15–28) on Aristoxenus, fr. 124 Wehrli. On Aristoxenus' views on the so-called "New Music", see also Visconti (1999) pp. 129–163.

80 Text 716.

81 Text 716.108–129. See Sicking (1998) pp. 133–138.

82 Barker (2007) pp. 421–428.

83 See p. 85 n. 140.

so-called ‘theorems’ of Book 3 of the *Elements of Harmonics*, which describe the “routes” (ὁδοί) that a melody can take starting from a given note in a musical scale.<sup>84</sup> Although the term κίνησις is not used here, the image of one or more possible ‘routes’—while there are others which would be unmelodic and should be ruled out—suggests a dynamic conception of melody as a process rather than a set of intervals. As for Theophrastus, his reflections on the genesis of music involve the idea of a “movement” (κίνημα) on the part of the soul, as we will see in due course (see text 716). We might conclude, therefore, that both Aristoxenus and Theophrastus saw the essence of music and musical sound in movement, the former basing his thought on the κίνησις τῆς φωνῆς, the latter on the κίνησις τῆς ψυχῆς.

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84 E.g. Aristoxenus, *Elements of Harmonics* 3.66–68 pp. 83.4–85.8 Da Rios, on which see Barker (2007) p. 206.

## The Sources

The primary sources for the extant Theophrastean texts on music can be arranged chronologically as follows:

- 1 Philodemus (c. 110–40 BC)
- 2 Apollonius (II cent. BC)
- 3 Plutarch (c. 45–120 AD)
- 4 Aulus Gellius (c. 130–180 AD)
- 5 Athenaeus of Naucratis (III cent. AD)
- 6 Censorinus (III cent. AD)
- 7 Porphyry (III–IV cent. AD)
- 8 Aelius Festus Aphthonius (III–IV cent. AD)
- 9 *Ṣiwān al-ḥikma* (IX–X cent. AD)

### 1 Philodemus, c. 110–40 BC<sup>1</sup>

Born in the Syrian city of Gadara, Philodemus went first to Greece, where he was a pupil of the Epicurean scholarch Zeno of Sidon in Athens, then to Rome and Naples, where he established his own school and became close to the most powerful Roman families—suffice it to recall his friendship with Lucius Calpurnius Piso Caesoninus, father of the third and last wife of Julius Caesar. Calpurnius owned a large villa in Herculaneum (nowadays the town of Ercolano, in the metropolitan area of Naples), where the papyri containing the philosopher's works were kept. Unfortunately, this enormous material—Philodemus appears to have been a very prolific writer, covering a vast range of subjects, such as religion, education, rhetoric, poetics, music—was heavily damaged in the eruption of Vesuvius (79 AD), so that modern interpreters are left with brief remains, often out of context.

It is therefore difficult to reconstruct Philodemus' attitude towards Theophrastus; however, considering that Epicurus had authored a work entitled *Πρὸς Θεόφραστον* (*In Reply to Theophrastus*, see text 280.1),<sup>2</sup> one might suppose

1 See also *Commentary* 6.1 pp. 16–18; *Commentary* 9.2 pp. 8–11.

2 See *Commentary* 6.1 p. 16 n. 19.



that Philodemus too disagreed with Theophrastus' doctrines in many respects. As far as music is concerned, this impression is confirmed by the polemic tone of text 720 (q. v.).

## 2 Apollonius, 11 cent. BC<sup>3</sup>

This Apollonius, who is usually referred to as “the paradoxographer” in order to distinguish him from other ancient authors of the same name, is thought to have lived in the first half of the 11 cent. BC.<sup>4</sup> His only work we know of, a collection of *Amazing Stories* (Ἰστορίαι θαυμάσιαι), has been transmitted by a *codex unicus*, the Palatinus Graecus 398 (x cent.),<sup>5</sup> and amounts to fifty-one entries. According to the classification made by Alessandro Giannini,<sup>6</sup> the main topics of his collection are: botany (nos. 7, 15, 19, 29, 34, 41, 43, 45–48, 50), zoology (nos. 8, 10–13, 20–22, 26–27, 39, 44), ethnography (24, 38), physics (23), stones (36), and springs (14). In comparison to his predecessor Antigonus of Caristus (III cent. BC), he shows a new interest in botany and human physiology, which has been explained by reference to the influence of Theophrastus<sup>7</sup>—from whom he takes as many as thirteen entries (nos. 16, 29, 31–34, 41, 43, 46–50)—and, in general, of Aristotle and his school.<sup>8</sup> Apollonius seems to have drawn upon the work of a Bolus—most presumably the Hellenistic writer Bolus of Mendes—, but we are in no position to ascertain either how many entries come from Bolus,<sup>9</sup> or to what extent Apollonius altered his sources' reports. However, if we are to judge from those cases in which one can

3 See also *Commentary* 6.1 pp. 12–16.

4 See Fortenbaugh (2012) p. 156 n. 3, with bibliographical references.

5 See Giannini (1967) p. 7.

6 Giannini (1964) p. 123.

7 Ibid.

8 See Giannini (1964) p. 123 n. 144 and Fortenbaugh (2012) p. 156 n. 8. The other alleged sources are: Abaris (4), Andron or Abron of Halicarnassus (8), Aristotle (7,9,11, 21, 25–28, 35, 37, 39, 44, 51), Aristoxenus (30, 40), Ctesias (17, 20), Eudoxus of Cnidus (38), Eudoxus of Rhodes (24), Heracleides (19), Philarchus (14, 18), Skymnus of Chios (15), Sotacus (36), Theopompus (1,10).

9 The issue is discussed by Giannini (1964) p. 123 n. 144. It is likely that Apollonius used Bolus as a source for the stories of extraordinary men, and that his influence is limited to the first six entries of Apollonius' extant collection. Further discussion in *Commentary* 6.1 pp. 13–14.

compare Apollonius' version to Theophrastus', it seems that the former tended to paraphrase or alter the latter's diction.<sup>10</sup>

The stories collected by Apollonius cover different aspects of the supernatural: supercentenarians, cases of bilocation, ecstatic journeys of the soul outside the body, the foreseeing of earthquakes, plagues and other calamities, strange plants and animals, etc. Only two entries have to do with music: one is no. 40, from Aristoxenus' *Life of Telestes*,<sup>11</sup> reporting the strange case of Southern Italian women suddenly jumping to their feet and stampeding out of the cities in a frenzy; the other is text 726A.

### 3 Plutarch, c. 45–120 AD<sup>12</sup>

One of the antiquity's most copious writers, Plutarch of Chaeronea in Boeotia had a solid Platonic background and a wide knowledge of both Greek and Latin literatures.<sup>13</sup> His works fall into two main categories: a series of fifty biographies (referred to as *Βίοι παράλληλοι*, *Parallel Lives*) and a collection of miscellaneous writings which go under the general—and partially misleading<sup>14</sup>—title of *Ἠθικά*, *Moralia*. An ancient list of his works, known as the *Catalogue of Lamprias*,<sup>15</sup> provides the titles of other works which are now lost. Theophrastus is one of the philosophers most often quoted in this vast corpus, as shown by the fact that his name occurs in sixty-seven different Plutarchan writings. As far as music is concerned, Plutarch seems to consider some Theophrastean reflections on acoustics, organology and music theory as an example of how questions related to music could be discussed in a sympotic context (see text 715).

10 Two significant cases from the *Equiry into Plants* are discussed in Fortenbaugh (2012) pp. 158–161.

11 Aristoxenus, fr. 117 Wehrli.

12 See also *Commentary* 6.1 pp. 35–37; *Commentary* 9.2 pp. 17–20.

13 Plutarch's writings are a treasure of quotations from Greek poets and philosophers of the archaic and classical periods. As for his knowledge of Latin, it has been argued that it was not deep enough as to allow him to appreciate literary prose (Weissenberger 1895 pp. 27–31; Jones 1971 pp. 20; 81–87).

14 The writings on philosophic and ethical matters are in fact only a small part of the entire collection, which includes works on politics, theology, natural sciences, psychology and so on.

15 On which see the Loeb edition of Plutarch's *Moralia*, vol. xv pp. 3–7.

## 4 Aulus Gellius, c. 130–180 AD

When he wrote his twenty-book compilation of quite diverse material, the Roman miscellanist Aulus Gellius was well aware that his work was not without precedent. The *Attic Nights* (*Noctes Atticae*), whose title hints at the long winter nights Gellius had spent during his Athenian years collecting *memorabilia*, philological and lexicographical curiosities, strange anecdotes on ancient customs, rituals and so on, come after a series of other miscellaneous works of the same kind, fancily entitled *Muses* (*Musae*), *Woods* (*Silvae*), *Mantle* (πέπλος), *Amaltheias' Horn* (Ἀμαλθείας κέρας), *Honeycombs* (κηρία), *et cetera*;<sup>16</sup> nevertheless, Gellius holds that his own work, unlike others, is immune from pointless erudition and only aims at providing an indispensable level of knowledge about those subjects whose ignorance would be “unbecoming, if not positively harmful, for a man with even an ordinary education”.<sup>17</sup>

Gellius shows no particular interest in music as such. As far as music theory is concerned, he apparently failed to understand the very basics of Pythagorean harmonics, and some statements, e.g. that “the longer dimension of sound is called “rhythm”, the higher “melody””,<sup>18</sup> reveal a blurred understanding even of the distinction between melody and rhythm. Going through the intricacies of the discipline was well beyond his purposes as a compiler and perhaps his personal tastes and attitudes; he could have subscribed to Varro's claim that “these things (i.e. harmonics) ... we either do not learn at all, or we leave off before we know why they ought to be learned. But the pleasure ... and the advantage of such sciences appear in their later study, when they have been completely mastered, while in their mere elements they seem foolish and unattractive”.<sup>19</sup> He seems rather more interested in the practical aspects of music—its usages at war, at dinner parties and banquets, as a medicine—and in what could be presented as a θαυμάσιον, such as the presence of female

16 Gellius, *Attic Nights*, Preface 3–10.

17 Gellius, *Attic Nights*, Preface 13 ... *quae* (scil. *artes*) *uirum ciuilitate eruditum neque audisse umquam neque attigisse, si non inutile, at quidem certe indecorum est* (tr. J.C. Rolfe). See also Holford Strevens (1988) pp. 36–38.

18 Gellius, *Attic Nights* 16.18.5 *longior mensura uocis ῥυθμός dicitur, altior μέλος*. See Holford Strevens (1988) pp. 325–326 (whose translation I borrow).

19 Gellius, *Attic Nights* 16.18.6 “*Sed haec—inquit M. Varro—aut omnino non discimus aut prius desistimus, quam intellegamus, cur discenda sint. uoluptas autem—inquit—uel utilitas talium disciplinarum in postprincipiis exsistit, cum perfectae absolutaeque sunt; in principiis uero ipsis ineptae et insuauae uidentur*” (tr. J.C. Rolfe, slightly adjusted).

musicians in Alyattes' army, or the sound of the *tibia* relieving the pain caused by sciatica and healing snake-bites.<sup>20</sup>

It is hard to ascertain whether or not Gellius had direct access to Theophrastus' work. In some cases it has been argued that he did,<sup>21</sup> but as far as music is concerned, we are in no position to speculate. The phrase *ego nuperrime in libro Theophrasti scriptum inueni* ("This I very recently found written in a book of Theophrastus") in text 726C (q. v.) is of no help, since it might have already been in Gellius' source.

## 5 Athenaeus of Naucratis, III cent. AD<sup>22</sup>

The only writing of Athenaeus that has survived is *The Sophists at Dinner* (Δειπνοσοφισταί), a fifteen-book account of a symposium held at the house of Larensius, a rich and well-connected Roman citizen. The work is dedicated to a person called Timocrates. For Books 1 and 2, which are lost in their original form, a later epitome is available, which is also preceded by a brief introduction containing a sort of summary of the entire work and a catalogue, albeit incomplete, of its many characters.<sup>23</sup> The epitomizer claims that the dialogue form is meant to be a tribute to Plato;<sup>24</sup> however, the *Sophists* is by no means a philosophical work. The narrative framework is fragile and the high number of banqueteers seems to contradict ancient sympotic etiquette;<sup>25</sup> on the other hand, it provides a structure in which an enormous amount of literary and antiquarian materials is loosely arranged.<sup>26</sup>

20 The report on female *aulos*-players in Alyattes' army at *Attic Nights* 1.11 is a misunderstanding of Herodotus, *Stories* 1.17, see Holford Strevens (1998) p. 230. For music at banquets see, e.g., *Attic Nights* 19.9; for music curing sciatica and snake-bites see *Attic Nights* 4.13 and text 726C.

21 For example, in the case of the Theophrastean treatise *On Friendship*: see Holford Strevens (1998) p. 113.

22 See also *Commentary* 6.1 pp. 53–58; *Commentary* 9.2 pp. 25–28.

23 Out of twenty-one different banqueteers appearing in the dialogue, plus some others who are not mentioned by name, only 15 (including Larensius himself) are listed in the introduction (see Canfora 2001 vol. 1 p. 4 n. 2).

24 Cf. Athenaeus, *The Sophists at Dinner* 1.3 1F δραματουργεῖ δὲ τὸν διάλογον ὁ Ἀθήναιος ζήλω Πλατωνικῷ. It has been noticed that the opening phrase of Book 1 bears resemblance to the opening of Plato's *Phaedo* (57A) and *Symposium* (172A).

25 The ideal number of diners was between three (as many as the Graces) and nine (as many as the Muses). See Varro *ap. Aulus Gellius*, *Attic Nights* 13.11; Canfora (2001) vol. 1 p. 6 n. 1.

26 A useful account of the overall structure of Athenaeus' work is in Jacob 2013 pp. 52–53.

In particular, Books 4 and 14 are a priceless source for our understanding of ancient Greek music. Book 4, which deals with famous banquets and symposia, contains a long digression on the *hydraulis* (water organ) and other musical instruments, mostly exotic (174A–185A).<sup>27</sup> Book 14 is on cookery; but since Amoebeus the *kitharōidos* joins the party and sings splendidly, the discussion shifts to the usefulness of music and the theory of musical *êthos*. It is in this context that the healing powers of auletic music are recalled (cf. text 726B). However, references to music are also found elsewhere: the aulete Andron of Catania, for instance, is mentioned in Book 1, in the course of a digression on different types of dance (text 718).

## 6 Censorinus, III cent. AD

All that we know for sure about Censorinus is that in 238AD he wrote a short treatise *About the Day of Birth* (*De die natali*), dedicated to Quintus Cerellius—probably his patron—on his 49th birthday. The text as we have it runs to 24 chapters and is clearly incomplete. Censorinus is also reported to have written a work *On Accents* (*De accentibus*),<sup>28</sup> which is now lost, while another compendium on music and metrics surviving under his name<sup>29</sup> is thought spurious.

After a dedication to Cerellius and a brief reference to the *Genius*, the god under whose protection every human being is born and lives (chapters 1–3), the text of the *De die natali* falls roughly into two parts. The first (chapters 4–14) deals with various aspects of birth, first the biological ones, such as the origins of the human species, the conception and growth of the embryo, the timing of delivery, then the astrological ones, e.g. the calculation of the horoscope, the relationship between music and birthdays (including an *excursus* on Pythagoras' thought), and finally the division of human life into distinct periods. Chapter 15 contains a praise of the dedicatee; after that Censorinus addresses different ways of measuring time, an issue that occupies the remainder of the text (chapters 16–24).

The writing is a patchwork of quotations from ancient authorities. It is highly unlikely, however, that Censorinus had direct knowledge of all the sources he mentions, including Theophrastus; most of the material seems to come from

<sup>27</sup> Translation and discussion in Barker (1984) pp. 259–272.

<sup>28</sup> See, e.g., Cassiodorus, *On Music* 10; Priscianus, *Principles of Grammar* 3.27.24.

<sup>29</sup> *De musica et de metrica epitoma disciplinarum*, in *Grammatici Latini* 6 pp. 607–617 Keil.

Varro and Suetonius.<sup>30</sup> In particular, Theophrastus is quoted twice, namely with reference to the origins of human race (4.2–4 = text 185) and music consisting in a movement of the soul (12.1 = text 721B).

## 7 Porphyry, III–IV cent. AD

Born to a Syrian family from the long-time Hellenized city of Tyre, Porphyry (234/235–305 AD) moved to Athens to join Longinus' school, where he received a philological and—to a lesser extent—philosophical education. In those years he is also reported to have studied geometry, and perhaps mathematics and music theory as well, with a friend of Longinus' called Demetrius.<sup>31</sup> In 263 he went to Rome, where he became a disciple of Plotinus, the Neoplatonic philosopher. Six years later, under mysterious circumstances,<sup>32</sup> he departed again, this time for Sicily. From that point on it becomes quite difficult to reconstruct his whereabouts: it is very likely that he was still in Sicily when Plotinus died (270), but what he did after that is covered with uncertainty. The mainstream opinion that he went back to Rome and took over Plotinus' school, which is only based on as tiny a piece of evidence as a single participle in Porphyry's *Life of Plotinus*,<sup>33</sup> does not stand closer inspection: there seems to have been no Plotinian school to take over, nor is Porphyry mentioned as a scholarch in any ancient source.<sup>34</sup> What we do know is that he arranged and published the texts of Plotinus' lessons under the title *Enneads*.

Porphyry was a remarkably prolific writer. His works cover a wide range of topics: grammar and philology (*Grammatical Questions*, *Homeric Questions*);

30 On the different schools of thought on this matter see Rapisarda (1991) pp. 169–170.

31 Proclus, *Commentary on Plato's Republic* 2.23.14–15 Kroll; Eusebius, *Evangelical Preparation* 10.3.1 Schroeder-Des Places.

32 According to what Porphyry himself would write some thirty years later in his *Life of Plotinus*, 11, he was suffering from a nervous breakdown so severe that he had even considered taking his own life. Plotinus, who was the only one who understood the ordeal he was going through, urged him to travel to Sicily and seek healing in the peace of Lilybaeum (Marsala, on the West coast of Sicily). A different account is provided by Eunapius in his *Life of Porphyry*, whereby Porphyry's discomfort was due to Plotinus' teaching, which had led him to hate his own body; he left Rome behind his teacher's back. According to Eunapius, Plotinus was able to find him in Sicily and managed to reconcile him to life. For further discussion, see Sodano (2007) pp. 199–244; more bibliographical references in Goulet (2012) pp. 1294–1295.

33 ἐπανελθόντι, 2.12. See, e.g., Dillon (1992) p. 192.

34 Barnes (2003) pp. 1X–X; Goulet (2012) p. 1295.

allegoric interpretation of poetry (*On The Cave of the Nymphs*); commentaries on works of Plato (e.g. on *Parmenides*, *Timaeus*, *Cratylus*, *Sophist*, *Symposium*), Aristotle (on the *Categories*, *Physics*, *Metaphysics*, probably on the *Ethics* and the treatise *On the Soul*)<sup>35</sup> and Ptolemy (on the *Harmonics*); philosophy (*Isagogē*, *History of Philosophy*, *Life of Plotinus*, *On Abstinence from Eating Animals*) and so on. Both Longinus and Plotinus had large libraries at their disposal, which gave Porphyry access to an enormous quantity of books, mostly if not exclusively philosophical.

Porphyry seems quite familiar with Theophrastus' works, as shown by the several quotations in the *On Abstinence*,<sup>36</sup> and might also have had some knowledge of their editorial history.<sup>37</sup> All the Theophrastean fragments on music cited by Porphyry come from his *Commentary on Ptolemy's Harmonics*, a ponderous work whose date of composition is uncertain, though I think it unlikely that it was written before Porphyry absorbed Plotinus' doctrines.<sup>38</sup> In at least one case, namely the long fragment from Book 2 of the *Περὶ μουσικῆς* (= text 716), it seems that he could read the original text at first-hand, as we will see in due course.

35 Girgenti 1996: 144–145.

36 See texts 440C; 512A; 531; 548A–D.

37 See the allusion to Andronicus dividing the Theophrastean corpus into treatises (Porphyry, *Life of Plotinus* 24 = text 39).

38 A fuller account of my view on this matter can be found in Raffa 2016a: XLIII–L. Suffice here to say that some features of Porphyry's conception of sense perception appear consistent with Plotinus'. First, both Plotinus and Porphyry pose the faculty of *phantasia* as the culmination of perception and, at the same time, the beginning of pure reasoning activity—a junction, as it were, between body and soul. Plotinus' conception of *phantasia* is consistent with the gnoseological process described by Porphyry (*Commentary on Ptolemy's Harmonics* pp. 13.16–14.29 Raffa = pp. 13.24–14.27 Düring) insofar as it produces a non-dimensional, incorporeal and formal representation of the object, whereas Aristotle's *phantasia* is a bodily faculty (see, e.g., Aristotle, *On the Soul* 403A.8–10). Second, the simile of the king and the scout, used by Porphyry to elucidate the relationship between reason and perception, is strikingly similar to the one used by Plotinus, *Enneads* 5.3.3.39–45. See also Barker (2015) pp. 45–47.

## 8 Aelius Festus Aphthonius, III–IV cent. AD

To this Aphthonius, whose name might suggest African origins,<sup>39</sup> and who is likely to have flourished in the first half of IV cent.,<sup>40</sup> a treatise *On Metres* (*De metris* or *De metris omnibus*, as the title reads in the *subscriptio* to Book 4)<sup>41</sup> is attributed, which has been preserved as part of Marius Victorinus' *Ars grammatica*—in fact, the better part of it.<sup>42</sup> This work is made up of four books, which deal, respectively, with metrics in general (Book 1), the so-called doctrine of the *metra prototypa* (Book 2), the doctrine of the derivation of some metres from others (Books 3 and part of Book 4), and the metres used by Horace (the remainder of Book 4).

Aphthonius' only mention of Theophrastus occurs with reference to the natural human ability to produce melodies and rhythms.<sup>43</sup> It is almost impossible that this is a direct quotation; it is far more likely that the philosopher's view came to him through some Latin source. Some features in the passage seem to suggest that the whole of it may come from a sympotic context.<sup>44</sup>

## 9 Šiwān al-ḥikma, IX–X cent. AD

The Arabic gnomologium *Šiwān al-ḥikma* (*Depository of Wisdom Literature*), which survives in several different versions since its original recension is lost,<sup>45</sup> was put together around 1000 AD. The compiler—an anonymous scholar, probably from Iran, and well acquainted with philosophy—gathered and organized a vast amount of doxographic, gnomic and biographical material on ancient thinkers. For ancient Greek philosophers he used pre-existing Arabic translations.<sup>46</sup>

39 Thus Bergk (1860) pp. 645–646; but *contra* Goetz (1894) col. 2800.

40 Goetz (1894); Morelli (1972) p. 38 n. 1 (with further bibliographical references).

41 *CGL* 6.176 Keil. See Morelli (1970) pp. 38–40.

42 Corresponding to vol. 6 pp. 31.17–173.32 of Keil's *Corpus Grammaticorum Latinorum*, the whole treatise runs to 181 pages altogether.

43 Text 719B.

44 See commentary on text 719B.

45 See Gutas (1982) p. 646.

46 It has been suggested that the Greek sources of these translators were some now lost philosophical writings by Porphyry and Johannes Philoponus (Rosenthal 1954; Dunlop 1957; Gutas 1985 p. 68).



The *Šiwān* is the most relevant source for Theophrastean sayings in Arabic. According to the convincing reconstruction offered by Dimitri Gutas (1985, pp. 83–84), the entry on Theophrastus in the lost original started with a saying on God, went on with a series of Theophrastean sayings organized thematically, and ended with the words of the philosopher on his deathbed. In particular, four sayings on music are recorded (texts 722–725), one of which, saying no. 11 (text 722), was probably misattributed to our philosopher.<sup>47</sup> They all deal with the relationship between music and the soul and, accordingly, touch on the theory of musical *êthos* (see above, *Introduction*, pp. 9–16, and below, p. 104).

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47 Gutas (1985) pp. 88–89; 97–99. However, as we will see in due course, the content of the saying is not incompatible with Theophrastus' thought.

## Titles of Books

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- 1    *Περὶ μουσικῆς α' β' γ'*, *On Music*, 3 books] Diogenes Laertius, *Lives* 5.47 = text 1.213; Porphyry, *Commentary on Claudius Ptolemy's Harmonics* 1.3 (p. 75.4–79.29 Raffa = p. 61.19–20 Düring) = text 716 (“in the second book”); Plutarch, *Table Talk* 1.5.2 632A = text 719A (?)
- 2    *Περὶ τῶν μουσικῶν α'*, [*v.l.* *Περὶ μουσικῶν*] *On the Musicians*, 1 book] Diogenes Laertius, *Lives* 5.49 = text 1.260; Šahrastānī, *Religions and Sects* (p. 337.16 Cureton) = text 4B (?)<sup>1</sup>
- 3    *Ἀρμονικῶν α'*, *Harmonics*, 1 book] Diogenes Laertius, *Lives* 5.46 = text 1.179

All the titles of Theophrastus' works on music known to us are found in Diogenes Laertius, whose catalogue appears to be made up of five different lists.<sup>2</sup> Very little can be said about his sources; it seems plausible, however, that they are diverse and cannot be reduced to the work of an Alexandrian librarian.<sup>3</sup> An important role must have been played by the activity of the 1-century BC scholar Andronicus of Rhodes, who reportedly organized the works of Aristotle and Theophrastus by topics and occasionally merged different shorter writings into collective treatises<sup>4</sup>—which might account, in particular, for the fact that in Diogenes' catalogue of titles there are some cases of duplication.<sup>5</sup>

1    Šahrastānī's testimony should not be taken as evidence for the existence of the *Περὶ τῶν μουσικῶν*, since the text bears no sign of a clear indication of a title.

2    Diogenes Laertius, *Lives* 5.42–50 = text 1.68–291. On these lists, as well as Diogenes Laertius' sources and their arrangement, see Sollenberger (1985) pp. 59–60 with n. 32, with thorough bibliographical references. The titles, except for the third list, are arranged in a roughly alphabetical order (further detail in *Commentary* 9.2 pp. 67–68).

3    William Fortenbaugh (*Commentary* 9.2 p. 68 n. 5) has now recanted his previous idea that the main source was the work *On Theophrastus* of Hermippus of Smyrna, a contemporary of Callimachus who was active in Alexandria.

4    See 39.7–8.

5    The clearest example of which is the work *Περὶ ζώων* (Diogenes Laertius, *Lives* 5.43–44 = text 1.108–116). Michael Sollenberger (1988) had already shown that a single work can be listed

Let us now discuss the titles related to music. According to Michael Sollenberger's reconstruction of the making of Diogenes' catalogue, the *Περὶ μουσικῶν* is likely to have come from list 3, whereas the *Περὶ μουσικῆς* and the *Ἀρμονικά* belong to list 2. Carlo Fatuzzo has recently argued that the title *Ἀρμονικῶν* is ambiguous, because it might refer either to a book on those music theorists, contemporaries of Aristoxenus and Theophrastus, who were often called *ἄρμονικοί* (if we take *ἄρμονικῶν* as masculine), or to a work on harmonics (if we take it as a neuter).<sup>6</sup> The difficulty with this argument is that in the case of a work *On Music Theorists* we would have expected a title something like *Περὶ τῶν ἄρμονικῶν* or even *Περὶ ἄρμονικῶν* (in the same way as *Περὶ τῶν μουσικῶν*), whereas a piece of writing about on musicians entitled *Ἀρμονικῶν* (*scil.* βιβλίον) α' would be unparalleled. In fact, Fatuzzo himself is aware of this problem, since he admits that the other option is more likely in some respects.<sup>7</sup> Much more interesting is Fatuzzo's suggestion that the three writings *Περὶ μέτρων*, *Ἀρμονικῶν* and *Περὶ ῥυθμῶν* might be thought of as sort of trilogy ("un'ideale trilogia") very similar, at least in the scholar's view, to Aristoxenus' plan to write on *Elementa Metrica* in addition to his *Elementa of Harmonics* and of *Rhythmics*;<sup>8</sup> thus, Theophrastus would have covered the whole of μέλος (which is made of ἄρμονία, λόγος and ῥυθμός). If so, these three works might be identified with the three books of the *Περὶ μουσικῆς*, which would turn out to be, according to the theory, a collection of three individual monographs. One might object that the *Περὶ μουσικῆς* is listed as an individual three-book treatise in Diogenes Laertius, but as we have recalled above, and Fatuzzo opportunely points out,<sup>9</sup> duplications of titles are not at all uncommon in Diogenes' list of Theophrastus' works. In the particular case of the *Περὶ μουσικῆς*, the occurrence of a collective title as well as titles of parts could account for the fact that part of the manuscript tradition, represented by v (Vat. gr. 1302, XIV–XV cent.), lists the *Περὶ μουσικῆς* as containing six books instead of three (*Περὶ μουσικῆς α'—ζ'*, see app. ad loc., text 714.213). If the copyist knew, or thought, that the *Περὶ μέτρων*, *Ἀρμονικῶν* and *Περὶ ῥυθμῶν* were in fact parts of the *Περὶ μουσικῆς*, he might have added these titles to the collective indication he had found in his source (*Περὶ μουσικῆς α' β' γ'* or simply *γ'*), thus reaching the total of six.

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under its comprehensive title and the titles of its different books or parts with reference to Theophrastus' botanical writings.

6 Fatuzzo (2009) p. 22.

7 "... per certi versi più verosimile", *ibid.*

8 *Ibid.* n. 4.

9 *Ibid.* n. 5.

Fatuzzo's suggestion is attractive; besides, it might prove useful for interpreting text 716, which is said by its source (Porphyry) to belong to the second book of the *Περὶ μουσικῆς*. One may wonder why a discussion of such a fundamental topic—the making of melody and the true nature of music in a work *On music*—should be placed in the second book instead of taking pride of place at the very opening of the treatise; but if we assumed that Book 2 of the *Περὶ μουσικῆς* was in fact the same as the book *Ἀρμονικῶν* and was the only one dedicated to melody and harmonics, the placement of our fragment would become more plausible. However, an objection still remains that cannot easily be dismissed. For the whole theory to hold, it must be assumed that a work entitled *Περὶ ῥυθμῶν* did exist, otherwise there would be no Theophrastean “trilogy” on music. Now, as Fatuzzo himself acknowledges, there is no textual evidence for a Theophrastean work *On Rhythms*, van Meurs's emendation of *Περὶ ἀριθμῶν* into *Περὶ ῥυθμῶν* at Diogenes Laertius, *Lives* 5.50 being purely conjectural and having no grounds in the manuscript tradition.<sup>10</sup> To sum up, if we are to accept Fatuzzo's suggestion we must assume that two different things went wrong with the tradition: namely, the corruption of the title of one treatise and the erroneous indication of three parts of a writing as three individual works. That is, of course, possible, *pace* Ockham's razor, but it can only be speculation, though philologically fascinating.

Only three Theophrastean texts on music are assigned unequivocally to a specific work by their sources: the long excerpt from the *Περὶ μουσικῆς* mentioned above<sup>11</sup> and two shorter passages dealing with the healing powers of music<sup>12</sup> which, according to Apollonius and Athenaeus respectively, come from a writing *Περὶ ἐνθουσιασμῶν* or *Περὶ ἐνθουσιασμοῦ*. As to the others, we cannot but speculate, always bearing in mind how tricky this terrain can be. On the one hand, it is true that, in general, the notion of *μουσική* covered a broader area than *ἄρμονική*, the latter being regarded as part of the former.<sup>13</sup> Accordingly, we

10 See app. ad loc. (1.285). Van Meurs probably thought that *Περὶ ῥυθμῶν* α', coming after *Προτρεπτικός* α' and before *Ὅριστικά περὶ λέξεως συλλογισμῶν* α', would fit better in the quasi-alphabetical order in which Theophrastus' works are sometimes listed. This kind of corruption is possible of course, but there is no definitive textual argument to support it.

11 Text 716.

12 Texts 726A–B (q.v.).

13 See, e.g., Bellermann's Anonymous, *On Music* 13 ἔστι δὲ τῆς μουσικῆς εἶδη ἕξ· ἄρμονικόν, ῥυθμικόν, μετρικόν, ὄργανικόν, ποιητικόν, ὑποκριτικόν. In Aristoxenus' thought is given a particular status as a fundamental branch of music (*Elements of Harmonics* 1 p. 5.4–7 *Da Rios* τῆς περὶ μέλους ἐπιστήμης πολυμεροῦς οὔσης καὶ διηρημένης εἰς πλείους ἰδέας μίαν τινὰ αὐτῶν ὑπολαβεῖν δεῖ τὴν ἄρμονικὴν καλούμενην εἶναι πραγματείαν, τῇ τε τάξει πρώτην οὖσαν

might expect that a treatise *Περὶ μουσικῆς* dealt with such themes as the general principles of music, the different disciplines that contribute to it, its historical development, its relation with other forms of expression and other branches of human knowledge, and other topics of this sort. That is the case with the pseudo-Plutarchan *On Music*, which includes a lengthy *excursus* on musical history and discussions of musical *êthos*; the same can also be said of Aristides Quintilianus' treatise of the same title. A book called *Ἀρμονικά* is expected to dwell mainly on more technical issues, such as concords, the structure of tetrachords and scales, systems, the rules of melodic and rhythmic composition, and the like. A good example is Aristoxenus' *Elements of Harmonics*. On the other hand, it is perfectly possible to find discussions of the most technical type in writings *Περὶ μουσικῆς*, as is shown, for instance, by pseudo-Plutarch's account of the so-called *spondeion* scale<sup>14</sup> or the chapters on harmonics in the first book of Aristides Quintilianus' *On Music*.<sup>15</sup> Moreover, Ptolemy's treatise, although entitled *Ἀρμονικά*, deals at length with issues such as the mechanism of perception, the making of judgment, the relationship between harmonic theory and the system of moral virtues, the structure of the soul and the zodiac<sup>16</sup>—topics which may well fit in the wider context of a discussion 'on music'. We should be aware, therefore, that no sharp distinction can be drawn between writings entitled *Περὶ μουσικῆς* and *Ἀρμονικά* as though they were two separate literary genres.<sup>17</sup>

In the light of this, when Plutarch mentions a discourse by Theophrastus on concords (Θεοφράστου περὶ συμφωνιῶν διαλεγόμενου, text 715.2–3), or Porphyry quotes his testimony on their ancient names (text 717), we cannot tell whether this topic was more likely to be discussed in a work on music or on harmonics. Nevertheless, in the case of text 719A we can suggest its attribution to the *Περὶ μουσικῆς*, partly because its topic (the three sources of music: λύπη, ἡδονή, ἐνθουσιασμός) fits very well in the discussion of the nature of music and is

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ἔχουσάν τε δύναμιν στοιχειώδη. "The science concerned with melody has many parts and is divided into several species, of which the study called Harmonics must be considered one: in order it is first, and its character is like that of an element." (tr. A. Barker); cf. Alypius, *Introduction to Music* p. 367 Jan; Porphyry, *Commentary on Ptolemy's Harmonics* p. 4.3–6 Raffa = p. 5.21–24 Düring), but it is still part of *μουσική*.

14 [Plutarch], *On Music* 11 1134F–1135B.

15 Aristides Quintilianus, *On Music* 1.6–12 pp. 7–30 Winnington-Ingram.

16 Ptolemy, *Harmonics* 1. 1 pp. 3–5; 3.6–16 pp. 98–111 Düring.

17 Moretti (2010) pp. 28–46 has drawn an interesting and useful list of 26 writings titled *Περὶ μουσικῆς* from Lasus of Hermione's (VI cent. BC) to Georgius Pachymeres' (XIII–XIV cent. AD), followed by a brief discussion of their main features.

therefore likely to belong to the same context as text 716, partly because the source's wording can be taken as an indication of the title (ὁρμηθεὶς ἀφ' ὧν Θεόφραστος εἴρηκεν περὶ μουσικῆς· κτλ.).<sup>18</sup> Attribution to the *Περὶ μουσικῆς* can perhaps be suggested, based on the topics, for texts 719B–721B as well.

As far as the texts from the Arabic tradition are concerned (texts 722–725), the path they have taken to reach their present form is apparently such a devious one, involving so many stages, not all of which are entirely clear, that one might doubt that they genuinely convey Theophrastus' thought (as we will see in due course), let alone that they come from a specific work.

Finally, text 718 (on the aulete Andron of Catania) might be easily attributed to the *Περὶ (τῶν) μουσικῶν*<sup>19</sup> on the basis of its content. However, it will become clear that there are other possibilities that cannot be ruled out: Theophrastus' account of the performative style peculiar to this musician may well have occurred, for instance, in a discussion on either the art of delivery,<sup>20</sup> or the importance of rhythm in the expression of musical *êthos*, or even—but perhaps less probably—on the innovations introduced by *πρῶτοι εὐρεταί*, not necessarily musicians. As often in such cases, a profession of ignorance appears sensible.

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18 One should be aware, however, of the caveats expressed by Barker (see text 714.1) and Meriani (2005) p. 290 n. 11.

19 The manuscript tradition is not unanimous about the presence of the article, see app. ad loc. (text 714.260).

20 As suggested by Fortenbaugh (1985) p. 243 with n. 49.

# The Texts

## 1 Harmonics

There can be no doubt that Theophrastus was extremely interested in harmonic theory, nor is there any chance that his peculiar attitude to quantitative accounts of pitch, theories of musical *êthos* and the Pythagorean-cum-Platonic mainstream<sup>1</sup> could have passed unnoticed among ancient writers. Indeed, at least in the case of text 716, his words have been preserved precisely because of his unorthodox positions. After citing from Theophrastus' *Περὶ μουσικῆς* and Panaetius the Younger's *Περὶ τῶν κατὰ γεωμετρίαν καὶ μουσικὴν λόγων καὶ διαστημάτων* (*On Ratios and Intervals in Geometry and Music*), Porphyry says that he must dwell on these matters because he wants to show the truth—namely, that pitch possesses a quantitative nature—by using many sources, for “our author (= Ptolemy) was not an ordinary one, nor were those who espoused this school of thought (= the quantitative theory of pitch) before him” (ταῦτα δ' ἡμῖν διὰ πλείονων μεμήκυνται ἐκ πολλῶν τὸ ἀληθὲς ἐνδείξασθαι σπουδάζουσιν. οὐ γὰρ ὁ τυγχὼν ἦν ἀνὴρ, οὗτ' αὐτός, οὗθ' οἱ πρὸ αὐτοῦ τὸν τρόπον τοῦτον ἐνηνεγμένοι κτλ., Porphyry, *Commentary on Ptolemy's Harmonics* p. 82.4–7 Raffa = p. 67.11–13 Düring). In fact, the only quotation in which the quantitative assumption is overtly contradicted is Theophrastus', since Panaetius' position seems to be slightly less intransigent.<sup>2</sup> As we will see in due course, however, we cannot tell if the refutation of quantity was the real core of Theophrastus' thought on harmonics or an incidental, though significant, discussion in a quite different context.

<sup>1</sup> See *Introduction*, pp. 16–19, and below, especially *Commentary* on text 716.

<sup>2</sup> Panaetius does claim that the difference of pitch between notes is a qualitative one, on the grounds that if it had to do with quantity, then a string would produce a higher note if plucked with more strength. On the other hand, he acknowledges that the mathematical quantification provided by the Pythagorean by means of ratios is necessary in order to cope with the natural weakness and imprecision of sense perception. It is the strings that produce an octave that are in 2/1 ratio, he says, not the notes themselves; when we say that a semitone is a half of a tone, he says, we are speaking metaphorically, in the same way in which we call a mule ἡμίονος while knowing all the while that a half-donkey does not equal a mule (Porphyry, *Commentary on Ptolemy's Harmonics* pp. 81.6–82.3 Raffa = pp. 66.16–67.10 Düring).

715 Plutarch, *That a Life in Conformity with Epicurus Cannot Be Pleasant* 13 1095E–1096A (BT vol. 6.2 pp. 145.25–146.19 Pohlenz-Westman)

Plutarch was a strong opponent of Epicureanism, which is no surprise for a Platonist. In particular, two works of his are devoted to the confutation of Epicurean doctrines. The first one is the *Against Colotes*, a lecture given by Plutarch in Chaeronea in response to a book entitled "Ὅτι κατὰ τὰ τῶν ἄλλων φιλοσόφων δόγματα οὐδὲ ζῆν ἔστιν, *That One Cannot So Much as Live in Conformity with the Opinions of the Other Philosophers*, written some six centuries earlier by a disciple of Epicurus called Colotes of Lampsacus;<sup>3</sup> the second one, which precedes the former in the extant arrangement of the *Moralia*, is the dialogue "Ὅτι οὐδ' ἡδέως ζῆν ἔστιν κατ' Ἐπίκουρον. Its title was clearly meant to reverse polemically that of Colotes' book and it records the conversation that Plutarch himself and three of his friends—Aristodemus, Theon and Zeuxippus—had after the lecture *Against Colotes*, on their way to the local γυμνάσιον (1–2 1086C–D).

The dialogue can be roughly divided into two parts, the first (up to 19 1100D) dealing with Epicurus' conception of pleasure and the second (from 20 1100E to the end) with his thought on religion and afterlife. In particular, the passage containing our text occurs in a discussion of the kinds of pleasure that are suitable for the pursuit of happiness. As Plutarch recalls, Epicurus had claimed in his *Διαπορίαι*, *Doubts or Puzzles*, that the sage should be fond of theatrical shows and Dionysian performances, while not allowing room for problems concerning music or philological issues, especially at a banquet.<sup>4</sup> Similarly, in the treatise *Περὶ βασιλείας*, *On Kingship*, Epicurus had gone so far as to urge princes and kings to enjoy themselves with military anecdotes and the inane talk of jesters rather than discussions concerning music and poetry.<sup>5</sup>

3 On whom see Crönert (1906); Mancini (1976) esp. pp. 61–63; Isnardi Parente (1988); Dorandi (1994).

4 Plutarch, *That a Life in Conformity with Epicurus Cannot Be Pleasant* 12 1095C = Epicurus, fr. 12.2 Arrighetti Ἐπίκουρος ... φιλοθέωρον μὲν ἀποφαίνων τὸν σοφὸν ἐν ταῖς Διαπορίαις καὶ χαίροντα παρ' ὄντινοῦν ἕτερον ἀκροάμασι καὶ θεάμασι Διονυσιακοῖς, προβλήμασι δὲ μουσικοῖς καὶ κριτικῶν φιλολόγοις ζητήμασιν οὐδὲ παρὰ πότον διδοῦς χώραν. The adjective φιλοθέωρος "lover of spectacles" is almost certainly an intentional allusion to the φιλοθεάμονες—the term used by Plato, *Republic* 475D, to refer to the people fond of theatrical shows, who do not deserve to be listed among philosophers. As has been suggested (Warren 2011 esp. pp. 289–290), the whole debate might have been triggered by the Epicurean reception of Plato's *Republic*.

5 Plutarch, *That a Life in Conformity with Epicurus Cannot Be Pleasant* 13 1095C = Epicurus,



Plutarch's reply consists of an array of rhetorical questions. Will Epicurus cover his ears so as not to hear Theophrastus discussing concords, Aristoxenus modulations and Aristotle Homeric poetry? What sort of enjoyment stirred up by the music of *auloi*, *kitharai* or choruses can surpass the pleasure a sage takes in discussing *auloi*, rhythms and harmonies?<sup>6</sup> If someone preferred music performed in theatres over music as a topic for discussions at banquets, would they not be "fierce adversaries of what is beautiful" (τῷ καλῷ ... πολεμεῖν, 715.8) and less musical persons than the Scythian king Ateas (IV cent. BC), who reportedly would rather listen to the whinnying of his horse than the renowned aulete Ismenias?<sup>7</sup> Avoiding the

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fr. 9 Arrighetti ἀλλὰ καὶ τοῖς φιλομούσοις τῶν βασιλέων παραινῶν στρατιωτικὰ διηγήματα καὶ φορτικὰς βωμολοχίας ὑπομένειν μᾶλλον ἐν τοῖς συμποσίοις ἢ λόγους περὶ μουσικῶν καὶ ποιητικῶν προβλημάτων περαινόμενους. ταυτὶ γὰρ ἐτόλμησε γράφειν ἐν τῷ Περὶ Βασιλείας, κτλ. These views are recalled seamlessly, as if they belonged to the same train of argumentation, which in my opinion is not beyond doubt. In fact, they seem to come from different contexts. The idea that the sage should stay clear of musicology and literary criticism pertains to the ways of reaching happiness (τὸ ἡδέως ζῆν); on the other hand, the advice that rulers should not be too close to poets and scholars in general seem to have to do with Epicurus' rejection of the idea of the intellectuals at court, as in the λάθρα βιώσας precept (thus Murray 2007 p. 19; *contra*, see Fish 2011 p. 103 with n. 325). Moreover, I would be cautious in assigning to Epicurus the whole content of the sentence at 1095C. I suspect, although I cannot prove it, that ταυτὶ γὰρ ἐτόλμησε γράφειν refers only to the first part of the sentence (ἀλλὰ καὶ ... φορτικὰς βωμολοχίας ὑπομένειν), while the words μᾶλλον ... ἢ λόγους ... περαινόμενους might be a caustic comment by Plutarch himself in order to emphasize the alleged inconsistencies and absurdities in Epicurus' thought for the sake of his own polemic.

- 6 Further on in the text the pleasure caused by this kind of knowledge is compared, by means of a quotation from Xenophon, to a hunter's joy in seeing a hare tracked, found, pursued and caught (Plutarch, *That a Life in Conformity with Epicurus Cannot Be Pleasant* 13 1096C; cf. Xenophon, *On Hunting* 5.33). On Epicurus' distinction between musical and poetic performances on the one side, and discussions of grammar and literary criticism on the other, see Asmis (1995) pp. 19–21.
- 7 Ismenias, who flourished in the IV cent. AD, was one of the most renowned *aulētai* of his time (Gossen 1916; see also commentary on texts 726A–C). The saying attributed to Polemon and Crates, who would rather compare themselves to the obscure aulete Dionysodorus than the celebrated Ismenias (Diogenes Laertius, *Lives* 4.22), implies that he was the prototype of the new generation of Theban virtuosi, blessed with the favour of the crowds and frowned upon by the conservatives. The anecdote implied here, which appears in nearly the same words, in *Sayings of Kings and Commanders* 174E–F (a work whose authorship has been doubted) and *On the Fortune or Virtue of Alexander the Great* 334B, goes that king Ateas, having taken Ismenias prisoner, ordered him to play during a drinking party; and when he did, applauded by everyone in the room, the king swore that the whinnying of his horse was a more pleasant

talk<sup>8</sup> of literary and music critics, Plutarch goes on, would therefore be less justifiable than the behaviour of dung-beetles and vultures, which flinch away from the smell of ointments and burnt offerings;<sup>9</sup> the implication being, apparently, that animal behaviour, unlike that of humans, is justifiable because it is determined by nature and instinct—what is edible to one species is inedible

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sound to his ears. In fact, it is quite unlikely that Ismenias was taken hostage by the Scythians. As suggested by Gardiner-Garden (1989) p. 33, he is much more likely to have visited Ateas' court as a member of a Macedonian embassy appointed by Philip II, which appears even more probable if he was indeed son to the famous Theban statesman of the same name (Gossen 1916; on the identification of these two Ismenias see Van der Stockt 1999 p. 589 n. 28). If this is the case, we might suggest that the king's bitter remark had little to do with his lack of appreciation of Ismenias' skills: rather, it may have been a barb thrown at Philip himself, who famously welcomed auletes to his court (e.g. Dorion, cf. Athenaeus, *The Sophists at Dinner* 10.46 435B–C) and invited them to the musical theme-contests he organized, like the one based on the character of the Cyclops, in which Antigenidas accompanied Philoxenus' piece, Chrysogonus played Stesichorus' and Timoteus Oeniadas' (Duris and Marsyas *ap.* Didymus of Alexandria, *Commentary on Demosthenes* 12 Pearson-Stephens; see Roesch 1995 p. 132). This interpretation can be perhaps encouraged by another saying of Ateas', also reported by the author of the *Sayings of Kings and Commanders* 174E, where the king, while grooming his horse, asked Philip's ambassadors if their king would do the same. When they said he would not, he replied: "Then how does he think he can engage me in war?" (τοὺς δὲ πρέσβεις τοῦ Φιλίππου ψήγων τὸν ἵππον ἠρώτησεν, εἰ τοῦτο ποιεῖ Φίλιππος· τῶν δ' εἰπόντων 'οὐ' καὶ πῶς δύνανται' φησι 'πόλεμον ἄρασθαι κατ' ἐμού;'). If read together, these two anecdotes seem to imply an opposition between Ateas' fondness for his horse, which may symbolize his courage and familiarity with soldiership, and on the other hand Philip's love of banquets and *aulos*-playing, which may suggest slack discipline and conduct in life.

- 8 It seems unlikely that the term *λαλιά* has the negative sense of 'babble' (as, e.g., in Theophrastus, *Characters* 7); it may refer, in my view, to the colloquial and unpretentious way of speaking that even philosophers and critics should adopt at a symposium (see also below, p. 43).
- 9 I suggest that Plutarch is borrowing a Theophrastean image here (cf. Theophrastus, *On the Causes of Plants* 6.5.1 ἔχει δὲ καὶ κατὰ τὰς ὁσμάς ὁμοίως· ἄλλαι γὰρ ἄλλοις ἐναντία καὶ οὐ πρόσφοροι καὶ οὐ μόνον εἰς τὸ μὴ δεῖσθαι μηδὲ ζητεῖν ἀλλ' ὑπὸ τῶν ἠδίστων ἡμῖν ἀναιρεῖσθαι καθάπερ οἱ γύπες ὑπὸ τῶν μύρων καὶ οἱ κύνθαροι ὑπὸ τῶν ῥόδων· κτλ. "So too with odours: different odours are bad or unsuited to different animals, not only to the point that the animal does not want them or seek them out, but to the point that it is killed by odours most delightful to man, as vultures are killed by perfumes and beetles by roses; etc.", tr. B. Einarson-G.K.K. Link), and one he must have found particularly useful, since he uses it elsewhere (*Table Talk* 710E, with reference to those philosophers who banish music and entertainment from banquets: φιλόσοφος δ' ἀνὴρ αὐτὸν ἐκ συμποσίου φεύγων καὶ ψαλτρίας ἀρμυρομένης ὑποδεῖσθαι βοῶν ταχὺ καὶ τὸν λυγροῦχον ἄπιεν οὐ καταγέλαστός ἐστι, τὰς ἀβλαβεστάτας ἡδονάς, ὥσπερ οἱ κύνθαροι τὰ μύρα, βδελυττόμενος;).

to another, and what causes pleasure to one is loathsome to another.<sup>10</sup> I would suggest that the last image might be a barb thrown at the Epicurean conception of the wise man and his education. In a fragment from a work by Philodemus, *On Frank Criticism* (Περὶ παρρησίας, *De libertate dicendi*), which is thought to be a handbook of Epicurean psychagogic theory,<sup>11</sup> we find what seems to be an educational precept to a young man, presumably a trainee Epicurean: ὦ παῖ, καθάπερ τρο[φ]ήν | ἄλλοτρίουσαν ἔ[χ]πτ[υε] | ἀταράχως “O child, calmly spit (it) out just like food that repels”.<sup>12</sup> Although there is no object to the verb ἔ[χ]πτ[υε], the suggestion has been made that what the παῖς should spit out is the doctrines of other schools—perhaps, more specifically, their doctrines on frankness.<sup>13</sup> In particular, Norman De Witt claimed that the expression referred to “all other knowledge (music, rhetoric, and geometry)”.<sup>14</sup> If these interpretations are correct, we can conclude that the rejection of foreign doctrines on the part of disciples had been described by the Epicureans as the spurning of a disgusting food; and if this is the case, Plutarch might have used Theophrastus’ account of the behaviour of dung-beetles and vultures as a retort against Epicurus, thus comparing the sage’s rejection of such things as knowledge and pleasure to the instinctual and irrational behaviour of animals.

The following list of προβλήματα (1096A–C)—which are expressed in the same form as the pseudo-Aristotelian problems—gives the reader a taste of the topics Plutarch had in mind for his imaginary banquet. Some of the topics concern acoustics applied to organology (why in a pair of *auloi* of equal lengths pitch is affected by the width of the pipes;<sup>15</sup> why, if the *sýrinx* is drawn back, the

10 See again Theophrastus, *On the Causes of Plants* 6.4.7 ἀλλὰ καὶ τὸ ἡμῖν ἄτροφον ἑτέροις τρόφιμον καὶ τὸ ἄλλοις τρόφιμον ἄλλοις ἄτροφον. ὥς γὰρ ἂν αἱ φύσεις ἔχωσι κατὰ τὰς κράσεις, οὕτως καὶ αἱ τροφαὶ καθ’ ἑκάστον ἀρμόσουσιν. “Instead what is non-nutritive for man is nutritive for others; and what is nutritive for one set is non-nutritive for another. For the nutritive character varies in each case with the different types of natures in the matter of the tempering of the qualities” (tr. B. Einarson-G.K.K. Link).

11 Thus Konstan-Clay (1998) p. 2.

12 Philodemus, *On Frank Criticism* fr. 18.1–2 Olivieri (tr. D. Konstan-D. Clay).

13 Thus Marcello Gigante; see references in Konstan-Clay (1998) p. 39 n. 41.

14 De Witt (1936) p. 207.

15 Einarson and De Lacy’s Loeb text reads διὰ τί τῶν ἴσων αὐλῶν ὁ στενότερος (ὀξύτερον, ὁ δ’ εὐρύτερος) βαρύτερον φθέγγεται “the narrower is higher-pitched, the wider lower-pitched”; the words (ὀξύτερον, ὁ δ’ εὐρύτερος) are an integration by Rasmus. However, the text may need no emendation. According to some theorists, a wider pipe produces higher notes than a narrower one of equal length because air can move faster through it, and the swifter the movement of the air, the higher the pitch of sounds. See Aelianus *ap.* Porphyry, *Commentary on Ptolemy’s Harmonics* p. 41.5–8 Raffa = p. 34.11–14 Düring πάλιν δ’ ἐὰν λάβῃς

pipe takes on a higher pitch in all its notes, and regains its previous pitch when the device is released;<sup>16</sup> why the two pipes produce lower notes when brought closer to one another and *vice versa*);<sup>17</sup> other topics have to do with theatrical acoustics (why straw muffles resonance when spread in the orchestra in a theatre; why Alexander the Great was urged not to build a bronze proscenium at Pella, lest actors' voices be spoiled),<sup>18</sup> while the last question deals with musical *êthos* or rather, as I would incline to think, music theory (why among musical genera the chromatic is more dispersed and the enharmonic more compact).<sup>19</sup>

δύο αὐλοὺς τοῖς μὲν μήκεσιν ἴσους, ταῖς δ' εὐρύτησι τῶν κοιλιῶν διαφέροντας, καθάπερ ἔχουσιν οἱ Φρύγιοι πρὸς τοὺς Ἑλληνικοὺς, εὐρήσεις παραπλησίως τὸν εὐρυκοιλίον ὀξύτερον προϊέμενον φθόγγον τοῦ στενοκοιλίου, where I take the term *κοιλιά* and its derivatives *εὐρυκοιλίος* and *στενοκοιλίος* as referring to the internal section of the pipes rather than the section of finger holes (on Phrygian *auloi* see also, e.g., Athenaeus, *The Sophists at Dinner* 4.84 185A; Pollux, *Onomasticon* 4.74). Besides, there are some difficulties with Rasmus's emendation: firstly, there is no μὲν between ὁ and στενότερος that can indicate the loss of ὁ δ' εὐρύτερος; secondly, with this emendation we have two subjects, while the following phrase clearly continues with just one (καὶ διὰ τί ... ὀξύνεται, see next note).

16 καὶ διὰ τί, τῆς σύριγγος ἀνασπασμένης, πᾶσιν ὀξύνεται τοῖς φθόγγοις, κλινομένης δὲ πάλιν βαρύνεται. Here again the text is troubled, βαρύνεται being Rasmus's emendation of the received βαρύνει. The *sýrinx* was most probably a device, perhaps similar to the so-called speaker holes of many modern wind instruments, which allowed the player to reach higher registers. An exhaustive discussion of the *sýrinx* is found in Hagel (2010–2011).

17 καὶ (scil. διὰ τί) συναχθεὶς πρὸς τὸν ἕτερον (βαρύτερον), διαχθεὶς δ' ὀξύτερον ἤχει. Thus the translation of Einarson and De Lacy, who accept Xylander's addition (βαρύτερον) and read διαχθεὶς instead of the *varia lectio* διδαχθεὶς. In fact, bringing together the two pipes of an *aulos* could hardly affect pitch, nor could pulling them apart from one another; moreover, such a procedure would have been extremely difficult, partly because a large part of the two mouthpieces was inside the player's mouth, partly because auletes wore a sort of strap—the so-called φορβεία—to sustain the muscles of their cheeks in the considerable effort involved in playing. This strap had two holes to allow the insertion of the mouthpieces, which would have rendered any sideways movement of the reeds even more difficult. There is no room here for going through the obscurities of this passage; however, I have a strong feeling that the text is damaged.

18 See, e.g., [Aristotle], *Problems* 11.7 899B.18 (Διὰ τί αἱ νεηλιφεῖς οἰκίαι μᾶλλον ἠχοῦσιν; “why do newly plastered houses echo more?”); 11.8 899B.25 (Διὰ τί, ἐὰν τις πίθον καὶ κεράμια κενὰ κατορύξῃ καὶ πωμάσῃ, μᾶλλον ἠχεῖ τὰ οἰκήματα, καὶ ἐὰν φρέαρ ἢ λάκκος ᾗ ἐν τῇ οἰκίᾳ; “why, if one buries and puts lids on a large jar or empty pot, the buildings echo more, and also if there is a well or cistern in the house?”), and especially 11.25 901B.30 (Διὰ τί, ὅταν ἀχυρωθῶσιν αἱ ὀρχήστραι, ἦττον οἱ χοροὶ γεγώνασιν; “why, when the orchestra is covered with straw, are choruses less able to be heard?” tr. R. Mayhew).

19 This is my rendering of the Greek καὶ τί δήποτε τῶν γενῶν διαχεῖ τὸ χρωματικόν, ἢ δ' ἀρμονία συνίστησιν. Translators usually intend this passage with reference to the effect of music on

A common feature of all these questions is that they involve no general principles or abstract matters of philosophy and physics; instead, they seem to arise from everyday musical experience. In this respect they comply with the criteria that Plutarch himself establishes elsewhere for the “sympotic kind” of discussion, as he puts it: no philosophical abstruseness, no “violent” demonstrations<sup>20</sup> and, most importantly, nothing that can intimidate or restrain those banqueteers who happen to be less learned.<sup>21</sup>

The way in which Theophrastus and other authors are mentioned here (ἐν δὲ συμποσίῳ Θεοφράστου περὶ συμφωνιῶν διαλεγομένου καὶ Ἀριστοξένου περὶ μεταβολῶν καὶ Ἀριστοτέλους περὶ Ὀμήρου κτλ., 715.2–4) favours the impression that they all contributed to symposiastic literature. Epicurus himself had written a *Symposium*<sup>22</sup> which certainly dealt with rhetorical issues, though we cannot tell if it included a discussion of what topics should be avoided at banquets; and so did Aristotle, to whom Diogenes Laertius (*Lives*, 5.22.10) attributes a

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the hearer: see, e.g., Goodwin “and why, of the several kinds of music, will the chromatic diffuse and the harmonic compose *the mind*?”, Einarson-De Lacy “and why of the genera does the chromatic relax *the hearer*, the enharmonic make *him* tense?”, Sircana “e perché mai tra i generi musicali quello cromatico *rilassa*, mentre quello enarmonico *suscita ansietà*?” (emphasis mine throughout). In my view, the verbs διαχεῖ and συνίστησιν are unlikely to have an absolute sense: they rather imply an object such as τὸ ἦθος, cf. Ptolemy, *Harmonics*. 1.12 pp. 28.28–29.2 Düring τοῦ δὲ γένους πρώτη μὲν ἐστὶν ὡς εἰς δύο διαφορά, κατὰ τὸ μαλακώτερον καὶ κατὰ τὸ συντονώτερον· ἔστι δὲ μαλακώτερον μὲν τὸ συνακτικώτερον τοῦ ἦθους, συντονώτερον δὲ τὸ διαστατικώτερον. I would also incline to take the whole phrase as referring to the structure of the tetrachord itself; accordingly, our passage might refer to the fact that in the enharmonic genera the three lower notes of the tetrachord shrink, as it were, into an interval of roughly a semitone altogether, whereas in the chromatic ones they span the approximate range of a tone.

20 See Plutarch, *Table Talk* 614A συμποτικὸν γένος; 614C οἱ δὲ χαρίεντες, καὶ ἀπ’ εὐθείας φιλοσοφῶσιν, τηλικαῦτα διὰ τοῦ πιθανοῦ μᾶλλον ἢ βιαστικοῦ τῶν ἀποδείξεων ἄγουσι τὸν λόγον “the pleasant men, though philosophizing rigorously, build their arguments through persuasiveness rather than the violence of demonstration”.

21 The less literate can contribute to and benefit from discussions even if they do not take active part in them, just as mute consonants amid vowels (Plutarch, *Table Talk* 613E καὶ γὰρ ἂν ὀλίγοι τινὲς ἰδιῶται παρῶσιν, ὥσπερ ἄφωνα γράμματα φωνηέντων ἐν μέσῳ πολλῶν τῶν πεπαιδευμένων ἐμπεριλαμβανόμενοι φθογγῆς τινος οὐ παντελῶς ἀνθρώπου καὶ συνέσεως κοινωνήσουσιν). On Plutarch’s conception of the topics suitable for a drinking party and the ways of treating them, see Ferrari (2009) pp. 87–88.

22 See Philodemus, *Rhetoric* 2 col. 52.27–28 p. 151; col. 56.22 p. 159; col. 57.22 p. 161 Longo Auricchio (1977). On the contents of Epicurus’ *Symposium* see Chandler (2006) pp. 129–142.

one-book Συμπόσιον.<sup>23</sup> Of the other writers mentioned, Aristoxenus is known to have authored a collection of Σύμμικτα συμποτικά, *Drinking-Party Miscellanies*, which might have included a discussion of modulation, although nothing of that sort is to be found in any of the extant fragments.<sup>24</sup> As far as we know, Dicaearchus of Messina (a contemporary of Aristoxenus)<sup>25</sup> wrote no *Symposium*;<sup>26</sup> however, he must have been interested in sympotic practices, since he is reported to have authored a treatise Περὶ μουσικῶν ἀγώνων, *On Musical Contests*, in which he dealt, *inter alia*, with the so-called σκολιά, the “crooked songs” that were performed at drinking-parties.<sup>27</sup> Finally, the Peripatetic Hieronymus of Rhodes (IV–III cent. BC) is mentioned by Plutarch among those who considered it “a very worthwhile task to record conversations over drinks”.<sup>28</sup> Although he arguably wrote no *Symposium* either, we are told by Diogenes Laertius that he and his friends would gather to celebrate the anniversary of Halcyoneus, son of Antigonus, and on those occasions they enjoyed after-dinner discussions (τὰς ἐπικυκλίους ἐξηγήσεις), which apparently consisted of riddles that the banqueters set one another in turn.<sup>29</sup>

As for Theophrastus, no work entitled *Symposium* features in the list of his writings;<sup>30</sup> however, it would perhaps not be absurd to suggest that one of the five books of his Προβλημάτων συναγωγή, *Collection of Problems*,<sup>31</sup> was dedicated to music or harmonics. After all, the contents and shape of some of his extant thoughts on musical issues could fit very well in the question-and-answer structure typical of sympotic προβλήματα. One could think of something like “why did the ancient call the octave *harmonia*?” (cf. text 717), or “if

23 See, e.g., Teodorsson (2009) p. 9.

24 Aristoxenus, fr. 122–126 Wehrli (fr. 127 = Plutarch, *That a Life in Conformity with Epicurus Cannot Be Pleasant* 13, 1095E). Modulation features in Aristoxenus’ account of the seven parts of harmonic science (in order: genera, intervals, notes, systems, τόνοι, modulations, melodic composition; see *Elements of Harmonics* 2.34–39 pp. 44–48 Da Rios), but is not dealt with in any passage of the treatise, at least in the form in which we read it (Barker 2007 pp. 117–121).

25 Suda s.v. Ἀριστόξενος, α 3927 Adler, σύγχρονος Δικαιάρχῳ τῷ Μεσσηνίῳ.

26 See the list of his works in Martini (1903) coll. 548–561.

27 Dicaearchus, fr. 88 and 89 Wehrli (= 89 and 90 Mirhady). See also Barker (2014) pp. 76–78.

28 Plutarch, *Table Talk* 612D–E = Hieronymus, text 9 White; tr. S.A. White in Fortenbaugh-White (2004) p. 113.

29 Diogenes Laertius, *Lives* 5.40 = Hieronymus, text 4 White.

30 Unless we take Plutarch’s expression ἐν δὲ συμποσίῳ Θεοφράστου κτλ. as referring to a title, which is unlikely, *pace* Teodorsson (2009) p. 9 with n. 24.

31 Listed by Diogenes Laertius (text 1.147).

two concordant notes are played together, why can we hear both of them simultaneously?" (cf. text 716.68–80), and so on.

716     **Porphyry, *Commentary on Ptolemy's Harmonics* 1.3 pp. 75.4–79.29**  
           **Raffa = pp. 61.16–65.15 Düring**

This long excerpt from Book 2 of Theophrastus' *On Music*, cited by Porphyry in the course of a discussion on the nature of variation in pitch, is the most important and detailed source for our philosopher's thought on music. In what follows I will try to elucidate the context in which the fragment occurs in the source, its contents, the train of thought it displays, and the main textual problems.

*Context in Porphyry*

The better part of Porphyry's commentary on Book 1, chapter 3 of Ptolemy's *Harmonics*—which bears the title Πῶς ἡ περὶ τοὺς ψόφους ὀξύτης καὶ βαρύτης συνίσταται, "how the height and depth that relates to sounds is constituted"<sup>32</sup>—is occupied by a long discussion of whether pitch variation should be considered qualitative or quantitative in its nature.<sup>33</sup> Porphyry intends to prove that Ptolemy is wrong in assuming that the pitch of sounds in general, and of musical notes in particular, can be reduced to quantity—a theory which Porphyry traces back to ancient Pythagoreanism.<sup>34</sup> The line of thought he espouses, which was shared by many other thinkers if we are to trust him, is that variations of pitch have a qualitative nature instead. Of course he was well aware that this position put him at odds with the authority of Plato, who had claimed, in a passage from the *Timaeus* recalled in the *Commentary*, that the swiftness and the slowness with which the air strikes the ear *are* the height and depth of sounds respectively, rather than being *the causes* of their height and depth.<sup>35</sup> As a consequence, if height and depth *are* different speeds, they cannot *be* but quantities, since speed is a quantity. This is probably why Porphyry presents

32     In Andrew Barker's translation (1989 p. 279).

33     Porphyry, *Commentary on Ptolemy's Harmonics* pp. 45.28–82.8 Raffa = pp. 38.9–67.14 Düring.

34     See the quotation of a passage from Archytas' *On mathematics* (fr. 1 Huffman = pp. 69.12–71.7 Raffa = pp. 56.5–57.23 Düring).

35     Plato, *Timaeus* 67A–C (= Porphyry, *Commentary on Ptolemy's Harmonics* p. 56.3–14 Raffa = p. 46.3–13 Düring).

Aristotle's account of pitch as different if not contrary to Plato's,<sup>36</sup> and then concludes, unexpectedly, that it is possible to interpret the two philosophers' views as concordant with one another.<sup>37</sup>

The bulk of Porphyry's view is that pitch variation is not quantitative *per se*, although it may depend causally on quantitative factors. It is not an easy task to follow his argument step by step. It starts at p. 45.28 Raffa = p. 38.9 Düring with the claim that since height and depth constitute the difference between one sound and another, and are accidents of sounds (συμβεβηκότα τῶν ψόφων), sound itself cannot be reduced to either of them, in the same way as an object cannot be reduced to its colour—i.e. cannot be said to *be* its colour—just because it *possesses* colour (αὐτὸς γὰρ καθ' ἑαυτὸν ἐπινοοῦμενος ὁ ψόφος οὐ συνεπιβάλλει μεθ' ἑαυτοῦ τὸ ὀξύ ἢ τὸ βαρὺ, ὡς οὐδὲ τὸ σῶμα τὸ χρώμα, εἰ καὶ πάντως τὸ σῶμα μετὰ τοῦ χρώματος). Next comes the most crucial question, namely whether height and depth should be placed under the genus of quality or quantity (ἐν τίνι οὖν γένει θετέον τὴν ὀξύτητα καὶ τὴν βαρύτητα; ἄρα γ' ἐν τῷ ποιῶ ἢ ἐν τῷ ποσῶ;). The topic is then temporarily abandoned, while Porphyry follows Ptolemy's account of different factors which do not affect pitch, such

36 In Aristotle, *On the Soul* 420A–B (= Porphyry, *Commentary on Ptolemy's Harmonics* p. 57.19–30 Raffa = p. 47.13–23 Düring) it is clearly stated that neither high sound is swift, nor is deep sound slow, but they are perceived in different ways because of the different kinds of impact made on the ear by swift and slow movements of the air respectively: οὐ δὴ ταχὺ τὸ ὀξύ, τὸ δὲ βαρὺ βραδύ, ἀλλὰ γίνεται τοῦ μὲν διὰ τὸ τάχος ἡ κίνησις τοιαύτη, τοῦ δὲ διὰ βραδυτήτα, κτλ. However, Porphyry's discourse seems inconsistent in this respect, for a few pages above he had attributed the theory whereby pitch is speed to both Plato and Aristotle (εἰ μέντοι ὡς οἶται Ἀριστοτέλης καὶ ὁ Πλάτων οὐκ αἰτίον τὸ ταχὺ ἐτίθετο τοῦ ὀξέος, ἀλλ' αὐτὸ τὸ ὀξύ ταχὺ καὶ αὐτὸ τὸ βαρὺ βραδύ· εἴη ἂν τοῦ ποσοῦ τὸ ὀξύ καὶ βαρὺ, εἴπερ ποσὰ τὸ ταχὺ καὶ τὸ βραδύ p. 55.23–26 Raffa = p. 45.27–30 Düring), whereas now, after commenting on Aristotle's text, he emphasizes the disagreement between them (ἀντιλέγων γὰρ Πλάτωνι φησιν “οὐ δὴ ταχὺ τὸ ὀξύ” κτλ. p. 58.24–25 Raffa = p. 48.12 Düring). Karamanolis' opinion (2006 p. 265) that Porphyry sees no disagreement here, rather just an objection raised by Aristotle against Plato on some minor issues, does not eliminate the difficulties of Porphyry's line of reasoning as a whole (see Barker 2015 pp. 22–27).

37 Porphyry's train of thought is particularly obscure, nor is an accurate analysis of it relevant to our purposes here; as far as it can be extracted from the commentator's arduous wording (p. 59.11–22 Raffa = pp. 48.25–49.4 Düring), Aristotle focuses on velocity as the active cause of pitch, while Plato intends it as its passive cause. Now, Porphyry says, since in Plato's view the accidents that are present in what is caused preexist as active factors in what causes, one might suggest that the two philosopher agree with each other in this respect (εἰ δὲ κατὰ τὸν Πλάτωνα ὡς ποιεῖ τὸ ποιοῦν, οὕτω πάσχει τὸ πάσχον καὶ ἔμπαλιν, εἴη ἂν τὰ περὶ τὸ αἰτιατὸν συμβαίνοντα προϋπάρχοντα ποιητικῶς ἐν τῷ αἰτίῳ, καὶ ταύτη ὁμόφωνοι εἶεν ἂν ἀλλήλοις οἱ φιλόσοφοι).



as the constitution of the thing struck, the force of the striker, its variations in thickness, thinness, roughness, smoothness and shape (pp. 46.20–52.29 Raffa = pp. 38.22–43.22 Düring).<sup>38</sup> After this parenthesis, the main issue is resumed at p. 53.6 Raffa = p. 43.23 Düring, with reference to density (πυκνότης) and sparseness (μανότης); in Ptolemy's view, these are qualities, but they do have bearings on pitch insofar as they are caused by quantity—namely, the quantity of substance in equal bulk. Porphyry reverses this argument by saying that, in the same way as the quantity of substance, which is by definition a quantitative factor, produces such qualitative results as the density or sparseness of an object, thus it produces the variation of height and depth in sounds, which should be therefore regarded as qualities as well.<sup>39</sup> At a later stage of his discourse Porphyry uses a different argument. The difference between deep and high sounds, he says, has nothing to do with the former being smaller than the latter. When the voice passes from a deeper note to a higher one, what takes place is a change (ἀλλοίωσις) rather than a process of increase (αὔξησις), as shown by the fact that it is perfectly possible to increase or decrease a sound—i.e. its volume—without changing its pitch. Moreover, if quantity were involved in pitch variation, plucking a string with double force would amount

38 Ptolemy's discussion of the constituents of sound is indebted to Aristotle's *Categories*, namely the passage on the 'affective qualities' (παθητικά ποιότητες) at 9A.28–10B.25 (see Raffa 1999 pp. 121–122).

39 p. 53.22–29 Raffa = p. 44.10–16 Düring δηλον οὖν ὡς ἡ βαρύτης τῶν φθόγγων καὶ ἡ ὀξύτης εἰς τὴν ποσότητα ἀναχθήσεται. τοῦτο δ' οὐ πάντως, φαίη ἂν τις, συνάγεσθαι ἐκ τοῦ λόγου, ἀλλ' ὥσπερ τὸ ποσὸν οὐκ ἐκωλύετο τῆς οὐσίας ποιότητος γίνεσθαι αἴτιον, οὕτως εἰ τὸ ποσὸν αἴτιον τῆς ὀξύτητος καὶ τῆς βαρύτητος, οὐ πάντως ποσὰ ἡ ὀξύτης καὶ ἡ βαρύτης. ἐνδέχεται γὰρ εἶναι ποιὰ, ἐπεὶ περ κείται οὐ ποσῶν μόνον, ἀλλὰ καὶ ποιῶν τὸ ποσὸν τῆς οὐσίας γίνεσθαι αἴτιον. "It is clear, then, that the depth and height of notes will be brought into the class of quantity. But, someone might say, this does not altogether follow from the argument. Just as there was nothing to prevent the quantity of substance from being the cause of a quality, so if quantity is the cause of height and depth of pitch, it is not inevitable that height and depth are quantities. For it is possible that they are qualities, since it is laid down that the quantity of substance is not the cause only of quantities but also of qualities" (tr. A. Barker). Cf. also a little further, pp. 54.22–55.10 Raffa = p. 45.5–17 Düring. The argument is slightly rephrased after a few pages (p. 64.20–24 Raffa = pp. 52.28–53.3 Düring), where Porphyry claims that even if one accepts that density and sparseness cause pitch variation because of quantity, it does not necessarily follow that pitch itself, i.e. the effect, shares the same quantitative status of its cause (... οὐτε ποσῶν αἰτίων ὄντων προσεχῶς τοῦ τε ὀξέος καὶ βαρέος ἀλλὰ ποιῶν, οὐτ' εἰ προσεχῶς τὸ ποσὸν ἦν αἴτιον τῆς τῶν ψόφων τοιαύτης διαφορᾶς ἐξ ἀνάγκης καὶ τοῦ αἰτιατοῦ ποσοῦ εἶναι ὀφείλοντος "... and ... neither if the causes of height and depth are strictly speaking the cause of this difference in sounds, must that which is caused necessarily be a quantity", tr. A. Barker).

to producing a note an octave higher—which of course is an absurdity.<sup>40</sup> It must be concluded, Porphyry says, that sounds should be thought of under different categories, quantity being responsible for their velocity, quality for their being deeper or higher.<sup>41</sup>

He claims that he could have brought even more arguments in support of his views if he had been the only one to know them well;<sup>42</sup> however, he goes on, there are many others who agree with him, whose names he is unable to provide because he does not have access to their texts; but fortunately these authors can be well represented by Theophrastus alone. It is at this stage that he introduces the philosopher's words. The reference to the movement of the soul as the productive factor of melody, occurring both at the beginning and at the end of the fragment, gives it a sort of cyclical structure that makes this text a self-contained unit, relatively independent of its context and therefore eligible

40 pp. 71.29–72.10 Raffa = p. 58.21–33 Düring; see esp. 72.4–10 Raffa ἡ δ' ὀξύτης τῆς φωνῆς οὐκ ἦν τῆς βαρύτητος αὔξεσις ἀλλ' ἀλλοίωσις μᾶλλον. ἔνεστι γοῦν τηροῦντα τὴν βαρύτητα σφοδρύνειν καὶ τὴν ὀξύτητα ἡρέμα προφέρειν καὶ ὅμως τηρεῖν τὴν παραλλαγὴν τῷ μὴ ποσότητος εἶναι αὐτάς, ἀλλὰ καὶ ποιότητος, ὡς αὔξειν τὸ ποσὸν τοῦ μέλανος καὶ μειοῦν τὸ λευκὸν τῆς κατὰ τὴν χροῶν διαφορᾶς μενούσης ἀπαλλάκτου. “But the height of the voice is not an increase of heaviness; it is rather an alteration. Thus it is possible to exert vigour while preserving low pitch, and to produce a high pitch gently while still preserving the contrast, because these are not quantities but qualities, just as it is possible to increase the quantity of black and to reduce the white while the difference in colour remains unchanged” (tr. A. Barker).

41 pp. 74.32–75.3 Raffa = p. 61.9–14 Düring ὅλως τέ τινα οὐκ ἐκωλύετο ἐν πλείοσι θεωρεῖσθαι κατηγορίαις καθάπερ τὰ γεωμετρικὰ σχήματα, καθ' ὃ μὲν μεγέθη ἐτύγχανεν ὄντα ἐν ποσῷ, καθ' ὃ δὲ τοιάνδε μορφὴν παρείχετο ἐν ποιῷ. τί οὖν ἐκώλυσε καὶ τοὺς ψόφους, καθ' ὃ μὲν ἐν ταχυτήσιν ἢ βραδυτήσι θεωροῦνται, εἶναι ἐν ποσῷ, καθ' ὃ δ' ἐν ὀξύτῃσι καὶ βαρύτῃσι, ποιότητι διαλλάττειν; “In general, there is nothing to prevent some things from being understood as belonging to several categories, as are geometrical shapes, which are in the category of quantity in so far as they are magnitudes, but in that of quality in so far as they present such and such a form. What then prevents sounds too from being in the category of quantity in so far as they are apprehended as swift and slow, but differing in quality in so far as they are apprehended as high pitched and low pitched?” (tr. A. Barker).

42 πλείους δ' ἂν ἔτι παρέσχον πίστεις πρὸς τὸ πρᾶγμα, εἰ μόνος αὐτὸς ἐγνωκὼς ἐτύγχανον. “I would provide many more pieces of evidence in support of my case if I were the only person who knew about them” (tr. A. Barker). Unlike Wallis (1699) p. 240, Barker and I take πλείους as plural accusative going with πίστεις instead of plural nominative (which would give the sense “many authors would have brought arguments in support of this fact, etc.”). Besides, the branch of the manuscript tradition followed by Wallis (i.e. the one which Düring named “g-Klasse”) has ἐτύγχανεν (3rd sing. pers.) instead of -ον (1st sing.), which is quite implausible since no author is mentioned in the previous sentences whose name could serve as a subject for the verb.

for excerpting. It is also worth paying attention to the way in which Porphyry introduces the quotation: οὕ (scil. Θεοφράστου) τὴν λέξιν ἀναγράφτεον, 716.5. The verb ἀναγράφω occurs in three other passages in his *Commentary* and seems to be always used in the sense of “transcribing word by word, accurately”;<sup>43</sup> only once is it associated with a less accurate quotation, but, in this case, Porphyry noticeably warns the reader that he has made some adjustments.<sup>44</sup> It stands to reason, then, that Porphyry quoted a continuous section of Theophrastus’ treatise faithfully, without paraphrases or abridgements.

A few lines after the end of the quotation, he criticizes Ptolemy for not having mentioned Theophrastus’ views at all in his treatise, not even to reject them; the implication seems to be that this omission makes Ptolemy’s whole theory of pitch methodologically weak.<sup>45</sup> It is clear that Porphyry quotes Theophrastus for a specific purpose: to rebut quantitative theories of pitch. However, as we will see in due course, this does not mean that this was also Theophrastus’ goal.

### *Contents*<sup>46</sup>

Melody arises when the soul expresses the movement of the melody through the voice. Some theorists, who are to be thought of as opposite to the ἀρμονικοί, hold that music consists in quantity and music intervals in numerical ratios; but there are some issues they seem to neglect (716.6–16). To begin with, if the difference between the notes of a melody lay in quantity and in quantity alone, then it would be the quantity itself that makes the melody what it is: as a consequence, anything numerable would be a melody or part of it. But there are things that are not sounds, yet possess plurality (πληθός), such as colours; so it must be concluded that a sound *qua* sound is one thing and plurality as such is another. Consequently, the difference between sounds can be due either to their being sounds or to their being pluralities (716.17–29). If we assume that

43 See p. 13.19; p. 14.30 Raffa = p. 13.28; 14.28 Düring.

44 p. 30.6–7 Raffa = p. 25.6–7 Düring ἡμεῖς δὲ τὰ παρ’ ἀμφοῖν ἀναγράψωμεν, ὀλίγα τῆς λέξεως συντομίας ἔνεκεν παρακινούντες “we shall write out what each of them (scil. Ptolemaïas and Didymus) says, altering a few things for the sake of brevity (tr. A. Barker)”. On Porphyry’s way of quoting his sources see also Huffman (2005) pp. 118–119.

45 p. 80.5–6 Raffa = p. 65.19–20 Düring ... ἃ χρὴν οἶμαι πρότερον ἐλέγξαντα τὸν Πτολεμαῖον οὕτως ἐγχειρεῖν τῷ ζητήματι “... which (scil. Theophrastus’ views), in my opinion, Ptolemy should have proven wrong before tackling the issue the way he did”.

46 The most thorough analysis of the argumentative structure of the fragment has been provided by Andrew Barker (1985) in a study to which the present discussion is inevitably indebted.

the difference consists in plurality, since sounds are distinguished from one another according to their being higher or lower, we should conclude that the difference itself must be a difference in quantity, hence in number. But since every single sound must have a pitch, if we take this difference in number away from sounds and hence remove their pitches, there will be nothing left to make them sounds rather than anything else (716.29–36). On the contrary, if we assume that the difference between sounds has to do with their peculiar features as sounds, we can get rid of this difficulty: it is clear that sounds behave in the same way as colours, whose differences involve no addition or subtraction of quantity (716.36–46). In particular, it is not true that a low sound is in any way “less” than a high one. Singers have to exert the same amount of force in order to give off either high or low notes, the difference being that in the former case they need to narrow their windpipes, in the latter to widen them; the same can be said of strings, since the thinness and tension required to produce higher notes is compensated for by the thickness and heaviness of the cords that give off lower notes (716.47–64). Another reason for rejecting the quantitative theory of pitch is that if notes differed from each other in the numbers according to which they move, there would be no consonance. The very fact that consonance exists implies that there must be an equality of power, and the difference is due to the specific quality of each note (716.64–90). The simple observation of either the human body or common musical instruments shows that high sounds differ from low ones in the manner of their movement rather than their speed, the high ones travelling forward, whereas the low ones travel all around (716.91–107). Finally, intervals (διαστήματα) are not the active cause of variations in pitch; they are causally relevant only insofar as they are items which must be omitted because if they were not, they would prevent melody from coming into being (716.107–129). The excerpt ends, quite abruptly, with a statement on the nature of music, which is said, once again, to be a movement occurring in association with the release of the soul from the evils caused by passions (716.130–132).

### *Course of Reasoning*

A mere glance at the overall structure reveals that the *pars destruens* of the philosopher’s discourse occupies much more space than the *pars construens*; we are given plenty of detail about what pitch is *not*, but are left with the doubt as to what exactly the author thought it *was*—instead, we are told what *music* is. In fact, we do not even know if Theophrastus had any positive view on the matter;<sup>47</sup> neither can we decide if the received text reflects the whole of our

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47 See, e.g., Barker (1985) p. 311.

philosopher's account of pitch variation or is only due to the way in which Porphyry quoted it. Anyway, we can only deal with the text as it is.

With these caveats in mind, we can move to consider the *pars destruens* first. Theophrastus takes ποσότης as what can be counted, numbered, or measured through numbers (πάν ἀριθμητόν, 716.24); this general notion appears in different forms throughout the text. As far as number *qua* mathematical entity is concerned, the philosopher refers to it as ἀριθμός, and his target is of course the Pythagorean theory (716.17–26). On the other hand, when he introduces the idea of πλῆθος, “plurality”, it is clear that he is still dealing with a quantitative theory, although one in which the notion of “quantity” takes on a different shade of meaning. That ἀριθμός and πλῆθος are not perfect synonyms<sup>48</sup> is shown, in my view, by the phrase πᾶσα γὰρ φωνή ἐστὶν ἥς μὲν ὀξυτέρα, ἥς δὲ βαρυτέρα, ὥστε ἥς μὲν ἔλαττον τὸ πλῆθος, ἥς δὲ πλείον, ὥστε ἀριθμός (716.32–34 “for every sound is higher than this one and lower than that, so that the plurality of the one is smaller and that of the other greater, and hence it is a number”),<sup>49</sup> where the implication is that being a number is not the same thing as being a plurality, i.e. something numerable: indeed, the former comes as a consequence of the latter. One may speculate, therefore, that ‘plurality’ should refer to something less abstract than ‘number’. In fact, it has to do with the physical elements that constitute sounds, as becomes clear when we are told that if pitch depends on plurality, then a higher sound must be moved “in accordance with more numbers” (716.30) than a lower one. Although obscure, the expression πλείονας ἀριθμούς κεκινήσθαι involves, on the whole, a conception of pitch as a result of movement (κεκινήσθαι) which can be measured, explained or accounted for in numerical terms (the most plausible interpretation being to take πλείονας ἀριθμούς as an accusative of relation); in this respect, it is clearly related to such other locutions as πλῆθος and ἐκ πλείονων συνέστηκεν, although not being perfectly equivalent to either.<sup>50</sup> The idea has some similarity to the theory whose most explicit statement is found in the introduction to the pseudo-Euclidean *Division of the Canon*, where denser movements are

48 That the two terms are equivalent is suggested, e.g., by Alexanderson (1969) p. 34. Barker apparently shared this view in his first translation of the fragment (1989: 111–118), then he changed his mind a few years later (1992), when he rendered πλῆθος with “plurality”.

49 Tr. A. Barker.

50 Barker (1985) pp. 296–307 tries to put some order into the maze of arguments Theophrastus piles up here by distinguishing three different formulas, the first one (F1) expressed by the words πλείονας ἀριθμούς κεκινήσθαι, the second referring to velocity (F2) and the third (F3) to the notion of πλῆθος.

connected to higher sounds and *vice versa*.<sup>51</sup> It is hard to tell if this is a development of earlier views of the sort we read, for instance, in the Aristotelian corpus (namely the *On Audibles* and Section 19 of the *Problems*);<sup>52</sup> however, suffice it

51 [Euclid], *Division of the Canon* pp. 148–149 Jan τῶν δὲ κινήσεων αἱ μὲν πυκνότεραί εἰσιν, αἱ δὲ ἀραιότεραι, καὶ αἱ μὲν πυκνότεραι ὀξυτέρους ποιοῦσι τοὺς φθόγγους, αἱ δὲ ἀραιότεραι βαρυτέρους, ἀναγκαῖον τοὺς μὲν ὀξυτέρους εἶναι, ἐπεὶ περ ἐκ πυκνοτέρων καὶ πλειόνων σύγκεινται κινήσεων, τοὺς δὲ βαρυτέρους, ἐπεὶ περ ἐξ ἀραιοτέρων καὶ ἑλασσόνων σύγκεινται κινήσεων “since of movements some are closer packed, others more widely spaced, those which are closer packed producing higher notes and those which are more widely spaced lower ones—it follows that some notes must be higher, since they are composed of closer packed and more numerous movements, and others lower, since they are composed of movements more widely spaced and less numerous (tr. A. Barker)”. On this passage, see Barker (1989) p. 192 n. 2; on its relevance to the theory mentioned here by Theophrastus, see Barker (1985) p. 300; on the chronology of the treatise (ca. 300 BC), which is likely to be compatible with Theophrastus, see Barker (1989) p. 190 and Creese (2010) pp. 131–136.

52 Cf., e.g., [Aristotle], *Problems* 19.39 921A.7–31 διὰ τί ἡδιδόν ἐστι τὸ σύμφωνον [codd.: ἀντίφωνον Barker 1989 p. 94 n. 59] τοῦ ὁμοφώνου; ... μαγαδίζουσι δὲ ἐν τῇ διὰ πασῶν συμφωνίᾳ, ὅτι ... οἱ ἐν τῇ συμφωνίᾳ φθόγγοι λόγον ἔχουσι κινήσεως πρὸς αὐτοῦς ... ἡ γὰρ δευτέρα τῆς νεάτης πληγῇ τοῦ ἀέρος ὑπάτη ἐστίν, κτλ. “why is correspondence pleasanter than unison? ... People magadize (i.e. play the same melody at two different pitches) in the concord of octave, because ... the notes in a concord have a ratio of movement to one another ... for the second blow of the air made by *neatē* is *hypatē*” (tr. A. Barker). It seems to me that this problem presupposes the same theory as the *Division of the Canon*, for, although the compiler’s purpose is less to explain pitch variation than to account for the pleasantness of playing in octaves, the frequency of movements is explicitly connected to pitch (Barker 1989 p. 95 nn. 62 and 64). Indeed, the way the author puts it—ἡ γὰρ δευτέρα τῆς νεάτης πληγῇ τοῦ ἀέρος—entitles us to suggesting that there is a plurality of *πληγαί* involved here. The case is different with [Aristotle], *On Audibles* 803B–804A, where there is no reference to pitch at all; moreover, one might even doubt that a theory of multiplicity is even implied. What is being discussed is why some sounds are rough; the explanation is that “there is not one single impact of the air together, but it is fragmented into small and frequent impacts” (τραχύνεσθαι δὲ συμβαίνει τὰς φωνάς, ὅταν ἡ πληγὴ μὴ μία γένηται τοῦ ἀέρος παντός, ἀλλὰ πολλὰ κατὰ μικρὰ διεσπασμένη). It is worth noticing that we do not have a succession of multiple impacts; rather, there is a single *πληγὴ* which, for some reason, fails to affect the whole air between the impact itself and the ear. As a consequence, rough sounds are perceived as if they were made of separate blows (καθ’ αὐτὸ γὰρ ἕκαστον τῶν τοῦ ἀέρος μορίων προσπίπτον πρὸς τὴν ἀκοήν, ὡς ἂν ἀπὸ πληγῆς ἑτέρας ὄν, διεσπασμένην ποιεῖ τὴν αἴσθησιν: multiple impacts are not real, but a mere perceptual impression) because the parts they are made of reach the hearing in such a way that “one sound fails while another impinges more vigorously” (ὥστε τὴν μὲν διαλείπειν τὴν φωνήν, τὴν δὲ προσπίπτειν βιαίτερον; tr. A. Barker). For the whole argument to work, it must be assumed that the pitch of the sound is conveyed by every single small part (ἕκαστον τῶν ... μορίων) and

to say, for our present purposes, that it cannot be reduced only to Pythagorean orthodoxy, but is certainly related to the debate on acoustics in Aristotelian environments.<sup>53</sup>

Another conception the philosopher refutes is the one whereby high sounds reach further than lower ones. Once again, he seems to have more than one target in mind: καὶ γὰρ εἰ, ὥς φασιν, καὶ πορρωτέρω ἀκούεται ὁ ὀξύτερος φθόγγος τῷ πορρωτέρῳ διὰ τὴν τῆς κινήσεως ὀξύτητα διικνεῖσθαι ἢ (τῷ) διὰ τὸ πλῆθος γίνεσθαι, οὐκ ἂν ποτε γένοιτο σύμφωνος οὗτος πρὸς τὸν βαρύν, κτλ. “Further, if, as they say, the higher note is also heard at a greater distance, *through* its travelling further because of the sharpness of its movements, *or through* its arising as the result of plurality, then this note could never be concordant with the lower one, etc.”<sup>54</sup> Two different theories are recalled here, the one involving the shape of the movement, the other involving plurality. Let us consider the latter first. In this context, the greater quantity or “plurality” associated with higher sounds is deemed responsible for their reaching further rather than their height—a view that has been rebutted earlier (see above). One might suggest that the most suitable target is a theory in which higher pitch is caused by greater force; among ancient acoustic theories, the one that best matches the picture is Archytas of Tarentum’s (v–iv cent. BC), whereby higher

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is not determined by the speed with which these parts reach the hearing, because, if this were the case, the rougher the sound, the lower the pitch and *vice versa*—which is absolutely nonsensical. Accordingly, the passage appears to be more a qualitative account of auditory perception than a quantitative account of pitch. It might be likened to the image used by Heraclides *ap. Porphyry, Commentary on Ptolemy's Harmonics* pp. 37.12–17 Raffa = pp. 30.28–31.3 Düring, whereby a spot on the surface of a spinning cone is seen as a circular line and a line of a given colour makes the whole surface appear of the same colour: πολλάκις γὰρ κώνου κινουμένου, στιγμῆς ἐπούσης μῆς ἐπὶ τοῦ κώνου λευκῆς ἢ μελαίνης, φαίνεσθαι συμβαίνει κύκλον ἐπὶ τοῦ κώνου ὁμόχρουν τῇ στιγμῇ· καὶ πάλιν γραμμῆς μόνης ἐπούσης λευκῆς ἢ μελαίνης τοῦ κώνου κινουμένου, τὴν σύμπασαν ἐπιφάνειαν συμβαίνει τοιαύτην φαίνεσθαι, κτλ. “For often when a cone is in motion, and there is one white or black spot on the cone, the result is that there appears to be a circle on the cone, of the same colour as the spot. And again, if there is one white or black line, and the cone is in motion, the result is that the whole surface appears to be of the same colour as is the line, etc.” (tr. A. Barker). On the identification of this author with Heraclides of Pontus Barker 2009 pp. 275–278 has recanted his previous skepticism. Here again, what varies with the speed of the cone is only the perceived continuity of sound, not its pitch. Finally, [Aristotle], *On Audibles* 804A the higher frequency of impacts attached to higher notes is not presented as the cause of their being higher (as pointed out by Barker 1989 p. 107 n. 40).

53 Barker (1985) pp. 291–297.

54 Text 716.9–72 (tr. A. Barker; emphasis mine). For the textual aspects see below, pp. 69–73.

sounds are compared to far-reaching shafts.<sup>55</sup> In response to this conception, Theophrastus introduces a notion that can be perhaps described as “the total amount of force needed for a note to be uttered”. This idea makes its first appearance at 716.48, where we are told that even low notes have “their own kind of magnitude” (ἰδιόν τι μέγεθος); a little further, the same idea is referred to as “power”, (ἰσοδυναμῆσαι, 716.67; ἰσότης ... τῶν δυνάμεων, 716.79). As the argument unravels through a series of examples taken from the human voice, *auloi*, and stringed instruments,<sup>56</sup> it becomes clear that the philosopher has

55 Archytas, fr. 1.20–31 Huffman *passim* αἱ γὰρ τις ῥάβδον λαβὼν κινοῖ νωθρῶς τε καὶ ἀσθενέως, τῇ πλαγῇ βαρὺν ποιήσει τὸν ψόφον· αἱ δὲ καὶ ταχὺ τε καὶ ἰσχυρῶς, ὁξύν ... ἔτι δὲ καὶ τοῦτο συμβαίνει ὥσπερ ἐπὶ βελῶν· τὰ μὲν ἰσχυρῶς ἀφιέμενα πρόσω φέρεται, τὰ δ' ἀσθενῶς ἐγγύς ... τῷ αὐτῷ δὲ καὶ ταῖς φωναῖς συμβήσεται· τῇ μὲν ὑπὸ τῷ ἰσχυρῷ τῷ πνεύματος φερομένη μεγάλῃ τε ἦμεν καὶ ὁξέῃ, τῇ δ' ὑπ' ἀσθενέος μικρῇ τε καὶ βαρέῃ. ἀλλὰ μὲν καὶ τούτῳ γὰ καὶ ἴσοιμες ἰσχυροτάτῳ σαμείῳ, ὅτι τῷ αὐτῷ φθεγξαμένῳ μέγα μὲν πόρρωθέν κ' ἀκούσαιμες· μικρόν δ' οὐδ' ἐγγύθεν. “For if someone should pick up a stick and move it sluggishly and weakly, he will make a low sound with his blow, but if quickly and strongly, high ... But further this also happens, just as with missiles. Those which are hurled strongly are carried far, those weakly, near ... The same thing will also happen with vocal sounds. The one carried by a strong breath will turn out to be loud and high, the one by a weak one, soft and low. But indeed we can also see this fact from this strongest sign, that we can hear the same man speaking loudly from far off but speaking softly not even from near at hand” (tr. C.A. Huffman). We do not know if this theory is genuinely Archytan or dates back to the philosopher's predecessors. At the beginning of the fragment, which was also the incipit of a treatise *On Mathematics* (according to Porphyry, *Commentary on Ptolemy's Harmonics* p. 69.10–11 Raffa = p. 56.4 Düring) or *On Harmonics* (according to Nicomachus, *Introduction to Arithmetic* 1.3.4), he attributes it to “those concerned with the sciences” (τοὶ περὶ τὰ μαθήματα), which might indicate philosophers in general, as suggested by Bowen (1982) p. 86 and Huffman (2005) p. 127, or a particular group of Pythagoreans, as I would be inclined to believe (see Raffa 2014b). The fragment is translated and thoroughly discussed in Huffman (2005) pp. 103–161.

56 This argumentative pattern, whereby an acoustic theory is clarified by means of the mechanism of the voice and of different instruments, makes its first appearance in Archyt. fr. 1 Huffman (where reference is made to sticks, shafts, voices, bullroarers, reeds). It also occurs in Xenocrates, fr. 87 Isnardi Parente (*ap.* Porphyry, *Commentary on Ptolemy's Harmonics* pp. 36.9–38.10 Raffa = pp. 30.2–31.26 Düring), where spinning cones and strings are mentioned, and is quite common in the pseudo-Aristotelian *On Audibles*. It is worth noticing that Aelianus (the author of a commentary on Plato's *Timaeus*, whose identification with the rhetorician Claudius Aelianus has been proposed by Barker 1989 p. 230 and 2010 p. 405 n. 4), after a discussion of pitch involving *auloi* and strings (*ap.* Porphyry, *Commentary on Ptolemy's Harmonics* pp. 40.4–44.17 Raffa = pp. 33.16–37.5 Düring), concludes “we have explained all these things accurately in the more typical cases”, ἐν γὰρ τοῖς τοπικωτέροις ἀκριβῶς πάντα δεδῆλωται ἡμῖν (p. 42.11–12 Raffa = p. 35.11–12 Düring). This is



in mind a sort of balance between the different kinds of forces that have to be exerted in order to produce higher or lower notes, in such a way that the overall force remains the same;<sup>57</sup> the implication is that since force does not vary, it cannot be the cause of pitch variation.

The brief passage on people singing melodies (περί τοὺς μελωδοῦντας κτλ., 716.50–55) deserves expanding. It hard to say how much the ancient Greeks knew about the physiology of singing, although songs were part of their everyday life since the earliest times. In every city there were choruses made up of male and female adults, boys and girls, which would not only perform at local ceremonies, rites and festivals, but also represented the city at major competitions all over the Greek world. Choristers were amateurs, but they would undergo severe training with strict diet prescriptions—to the point of starvation, if we are to trust Plato—,<sup>58</sup> especially for Panhellenic contests. Getting them in shape was the task of *chorodidaskaloi*. Unfortunately, we have no idea of their methods;<sup>59</sup> there are no treatises on that matter or, at least, none has survived. As far as the classical period is concerned, no specific vocabulary of vocal technique had developed, and the teaching of singing seems to have been essentially empirical. One may suggest that teachers made large use of metaphors in order to explain how to obtain a particular effect, express the intended mood or reach the trickiest notes.<sup>60</sup> It also stands to reason that

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my rendering of the adjective *τοπικός* in this context; Andrew Barker took it as meaning “in more appropriated places” (1989 p. 233) or, in his latest translation (2015 p. 147; see also n. 131), “in my (= Aelianus’) popular writings”.

57 Barker (1985) p. 303 likens this conception to that of “momentum” in modern physics.

58 Plato, *Laws* 665E. Certain foods were thought to damage or roughen the windpipe and were therefore avoided. Some hints at the physical training requested for singers are also found in the pseudo-Aristotelian *Problems* (e.g. 11.22). These practices relied on the general idea that performers should keep themselves in good physical shape and health for their voices to function better and gain loudness and effortlessness.

59 A *chorodidaskalos* was basically a chorus trainer; he prepared groups of non-professional singers for short periods and for single performances, such as choral contests or the staging of tragedies and comedies. Accordingly, he needed to teach both what to sing (melodies) and how to sing (the basics singing techniques). With the advent of musical professionalism, especially in the Hellenistic and the Imperial periods, another figure appears, the *phōnaskos*, which is more comparable to a modern vocal coach than a choir teacher, for he trained individuals—solo singers as well as orators or actors—on a regular basis and focused on the maintenance of their vocal health, no musical teaching being necessarily involved (see, e.g., Barker 2010). It has also been suggested that *phōnaskoi* were in fact professional singers themselves (Melidis 2010–2011).

60 I have suggested elsewhere that some metaphors and expression in Greek dramatic poetry

*chorodidaskaloi* urged choristers to observe and imitate their own attitudes and perhaps to touch their own bodies in order to feel the vibrations of sound in different regions according to the different registers (chest, head, falsetto). It is against this backdrop, I believe, that we should read this passage. Theophrastus' account of the physiology of singing reflects the beliefs of his time on how the vocal apparatus worked, but does not sound very accurate from a modern standpoint. The trachea (ἀρτηρία), for instance, can in principle be "stretched out" (ἐκτείνω), since the rings of which it is made are elastic and are connected to each other by cartilage but its variation in length is not related to the pitch of sound—in fact, it is the larynx, which is located at the upper end of the trachea, that is raised or lowered in the phonatory process. However, a singer's ability to reach the higher register does not depend on this sort of movement. Indeed, raising the larynx strains the vocal cords and may cause not only bad singing, but also serious voice damage—which is the reason why one of the first things singing students are taught nowadays is to keep their larynx low, even when reaching for high notes. Similarly, "drawing in the ribs" (συνάγειν τὰ πλευρά) would have interfered with diaphragmatic breathing, which requires exactly the opposite, i.e. that intercostal muscles are relaxed and allow lower ribs—the so-called 'false' or 'floating' ones—to follow the movement of the diaphragm. Likewise, as far as low register is concerned, the trachea cannot be widened (διευρύνω); the expression may refer to the lowering of the larynx and perhaps to the fact that singers feel their voice 'widen', as it were, when singing in lower regions, since lower notes tend to resonate more in the chest rather than cheekbones or head.

Let us now go back to Theophrastus' train of thought. The other theory recalled in this section of the fragment, which involves the shape of the movement, is implied in some of the pseudo-Aristotelian *Problems*,<sup>61</sup> although

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might have served as musical indications for the *chorodidaskalos* and the chorus: see my analysis of the *parodos* of Euripides' *Orestes* (Raffa 2016b).

- 61 See, e.g., [Aristotle], *Problems* 11.16 900B.23–28 ἡ δὲ λεπτή φωνὴ ὀξεῖά ἐστιν. οἱ μὲν οὖν ἄγονοι διὰ ταῦτα ὀξύφωνοι εἰσιν· οἱ δὲ ἄνδρες ἰσχύοντες τῷ πνεύματι πολλὴν ἀέρα κινέουσι, πολλὸς δὲ ὡν βραδέως ἂν κινεῖτο καὶ βαρεῖαν φωνὴν ποιεῖ. ἐποίει γὰρ ἡ τε λεπτή καὶ ἡ ταχεῖα κίνησις ὀξεῖαν φωνήν, ὡν οὐδέτερον ἐπὶ τοῦ ἀνδρός συμβαίνει γίνεσθαι "a thin sound is high-pitched. This, then, is why those who cannot procreate have high-pitched voices. But men are strong in the breath and so move much air, and since there is much of it, it must be moved slowly, and makes a low-pitched voice. For we saw that a thin and a swift movement makes a higher-pitched voice, and neither of these occurs in a man" (tr. A. Barker). It is worth noticing, incidentally, that lower pitch is here attached to greater force and *vice versa*, contrary to Archytas' views (see above, p. 54 n. 55). See also 11.6 899A.22–B.17; 11.19 901A.11–

apparently rejected by the author of the *On Audibles*.<sup>62</sup> Theophrastus' refutation seems to be limited to that aspect of the theory whereby the shape of movement has bearings on the distance to which notes can travel;<sup>63</sup> on the other hand, the philosopher acknowledges that high and low notes travel in different ways—forwards and upwards the former, equally in every direction the latter—and affect perception accordingly.<sup>64</sup>

The third and last idea that Theophrastus refutes is that intervals, διαστήματα, are the causes—hence the principles—of pitch variation (ἀρχαί, 716.109).

13 ἡ δὲ ὀξεῖα πόρρω ἀκούεται, ὅτι λεπτοτέρα ἐστὶ, τὸ δὲ λεπτὸν τὴν εἰς μῆκος αὔξησιν ἔχει “the high-pitched voice is heard from far away because it is thinner, and what is thin is extended to a distance” (tr. A. Barker); 19.8 918A.19–21 διὰ τί ἡ βαρεῖα τὸν τῆς ὀξεῖας ἰσχύει φθόγγον; ἢ ὅτι μείζον τὸ βαρὺ; τῇ γὰρ ἀμβλείᾳ ἔοικε, τὸ δὲ τῇ ὀξεῖᾳ γωνία “why does the low-pitched contain the note of the high-pitched? Is it because the low-pitched is greater? It is like an obtuse angle, while high pitch is like an acute one” (tr. A. Barker).

- 62 [Aristotle], *On Audibles* 800A.1–7 τὰς δὲ φωνὰς ἀπάσας συμβαίνει γίγνεσθαι καὶ τοὺς ψόφους ἢ τῶν σωμάτων ἢ τοῦ ἀέρος πρὸς τὰ σώματα προσπίπτοντος, οὐ τῷ τὸν ἀέρα σχηματίζεσθαι, καθάπερ οἶονταί τινες, ἀλλὰ τῷ κινεῖσθαι παραπλησίως αὐτὸν κτλ. “it is a fact that all voices and sounds occur when either bodies collide with bodies or the air collides with bodies, not by the air being shaped, as some people think, but by its being moved in just the same way, etc.” (tr. A. Barker). Barker (1989) p. 99 suggests that the theory that is being rejected here is the same as that referred to in the *Problems* (see previous note). It might be noticed, however, that the author of the *On Audibles* seems to be concerned less with pitch as such than with other characteristics of sounds, such as their being clear or muffled, rough or soft, and so on. There is no evidence that the shaping of the air he mentions here is the one which was thought to affect pitch; I believe, instead, that it has more in common with the σχηματισμός referred to by Ptolemy, *Harmonics* 1.3 p. 7.10–13 Düring (περιποιεῖ δὲ διὰ μὲν τοῦ σχήματος ἐπὶ μὲν τῶν τὸ τοιοῦτον ἐπιδεχομένων, οἷον τῶν γλωσσῶν καὶ τῶν στομάτων, σχηματισμοὺς ὥσπερ τινὰς νόμους τοῖς ψόφοις, παρ’ οὓς ὀνοματοποιοῦνται πάταγοι καὶ δοῦποι καὶ φωναὶ καὶ χλαγγαὶ καὶ μύρια ὅσα τοιαῦτα “through shape, in the case of things that admit such a variation, it (*scil.* the variation related to the things with which the impacts are made) makes configurations—modes, as it were—for the sounds, in correspondence with which names are coined such as clatters, thuds, voices, clangs, and a thousand like them”, tr. A. Barker), which is the way in which the vocal apparatus manages to imitate different kinds of sounds and to create names which suit them.

- 63 At 716.69–73 the idea is overtly rebutted (καὶ γὰρ εἰ ... καὶ πορρωτέρω ἀκούεται ὁ ὀξύτερος φθόγγος ... οὐκ ἂν ποτε γένοιτο σύμφωνος οὗτος πρὸς τὸν βαρύν “further, if ... the higher note is also heard at a greater distance ... then this note could never be concordant with the low one”, tr. A. Barker; but, the train of thought goes, since concords do exist, this cannot be true); at 716.87–90 it is presented again as something impossible (I take εἰ ... ἐκινεῖτο κτλ. as meaning “and if indeed the higher note moved to a greater distance, etc.”, rather than “if ... the higher note does move etc.” as in Barker’s rendering).

- 64 716.88–90; 98–100; see also Barker (1985) p. 311.

Although the notion of διάστημα might ring an Aristoxenian bell, not without reason indeed,<sup>65</sup> it has been convincingly shown by Andrew Barker that the διαστήματα which are referred to here—i.e. something that must be removed for melody to come into being (716.108–119)—cannot be the same as Aristoxenus', because Aristoxenus not only conceives of them as empty spaces between notes in a linear continuum, in such a way that there is nothing in them that could be removed or left out, but he never holds, at least in his extant works, that they *cause* pitch variation.<sup>66</sup> Indeed, his conception of ἐμμέλεια and ἐκμέλεια very closely recalls Theophrastus' remarks on the role played by διαστήματα in making melody possible.<sup>67</sup> On the contrary, it stands to reason that the διαστήματα that Theophrastus has in mind here—something that gets in the way of melody unless it is removed—share the same nature as notes, which means that they are *sounds*, although sounds that should probably be construed as a continuum of undetermined pitches rather than “notes” in the Aristoxenian sense of sounds with one and the same pitch (μία τάσις) throughout their entire length. Accordingly, as we have anticipated (see *Introduction*, pp. 20–21), the philosopher's target is more likely to be the IV-century empiricists called οἱ ἄρμονικοί than Aristoxenus.<sup>68</sup>

Let us now consider the *pars construens*. Once quantity, plurality, speed and force have been ruled out, the nature of pitch variation is to be searched for elsewhere. At 716.78–80 Theophrastus holds that for a concordance to exist, there must be at the same time an equality in δύναμις and a difference in ιδιότης between the concordant notes (ἀλλ' ἐπεὶ ἐστὶ τι σύμφωνον, ἰσότητα δηλοῦν ἀμφοῖν τοῖν φθόγγοιν, ἰσότης ἐστὶ τῶν δυνάμεων διαφέρουσα τῇ ιδιότητι ἐκατέρᾳ). We can therefore infer that *a*) Theophrastus conceives of two distinct characteristics of a note, the one called ιδιότης, “peculiarity”, the other δύναμις, “power”;<sup>69</sup> and *b*) since power is said to remain the same, it must be ιδιότης, whatever it is, that

65 That of διάστημα is a key notion to Aristoxenus' musical thought. The movement of melody is by definition an intervallic one, because voice (φωνὴ διαστηματική) moves from a certain pitch (τάσις) to another without touching any of the other possible pitches in between, contrary to what happens with normal speaking (φωνὴ λογικὴ or συνεχής). Such a conception presupposes that the interval between two notes is thought of as a distance between two points on a straight line, rather than a relationship between two quantities expressed by a numerical ratio.

66 Barker (2007) pp. 421–428; see also Fatuzzo (2009) pp. 33–38.

67 716.120–129; Barker (1985) p. 315.

68 On whose methods see the useful remarks of Meriani (2003) pp. 106–113; (2013) pp. 255–259.

69 In this context the term δύναμις cannot have the same meaning as in Aristoxenian theory,

is responsible for the difference in pitch. One might wonder if the equality in δύναμις is only limited to concords or applies to any other intervals, including non-concordant ones; it seems reasonable that the latter must be true, precisely because power does not affect pitch. As far as the idea of ἰδιότης is concerned, I would therefore suggest that it can be extended to any kind of intervals with clear conscience, since there is nothing in the text that explicitly prevents us from doing so. It can be concluded, accordingly, that in Theophrastus' view the pitch of a note always comes as a consequence of its ἰδιότης.

The next question is: what is this peculiarity exactly? The most defensible position is certainly that it has to do with quality. However, it cannot be but a conclusion by exclusion, grounded on the fact that all the factors that are rejected are quantities, each in its own way; it is also true, on the other hand, that the word ποιότης occurs nowhere in the text, as noticed by Andrew Barker.<sup>70</sup> The text does not provide a definition of ἰδιότης, but it does say how it works: the ἰδιότης of higher notes affects perception in such a way that the sense of hearing grasps them more quickly than the lower ones, just as something white is immediately visible against its background (716.83–87).<sup>71</sup>

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i.e. the function of a note within a melody or scale. It is obvious that two notes of different pitch cannot have the same function.

70 Barker (1985) p. 310.

71 Interestingly, apprehension by hearing is referred to by the verb ἀντιλαμβάνεσθαι (ἡ δ' ἀκοή θάπτον ἀντιλαμβάνεται διὰ τὴν ἰδιότητα τοῦ ὀξέος), which obviously recalls the notion of ἀντίληψις. Now, ancient thought generally conceives of ἀντίληψις as the response of the body—or the soul—to a perceptual stimulus. Even though the word ἀντίληψις as such does not appear in any philosophical texts of the archaic and classical periods—the occurrences in Alcmaeon (fr. 10 Diels-Kranz *ap.* Aetius, *On the Doctrines of the Philosophers* p. 404.22–23 Diels) and Archytas (test. A18 Huffman *ap.* Porphyry, *Commentary on Ptolemy's Harmonics* p. 130.1–131.10 Raffa = p. 104.4–16 Düring) being more likely to be paraphrases than *ipsissima verba* of those philosophers—the idea that the way in which objects are perceived depends on the organs' response to different kinds of stimuli seems to predate the substantive. In particular, the different velocities with which sight and hearing operate are accounted for by introducing a difference in ἀντίληψις. The exegesis of Alexander of Aphrodisias to Aristotle, *On Sense and the Sensible* 446B (*Commentary on Aristotle's 'On Sense'* p. 132.23–133.6 Wendland) makes it clear that unlike sight, in the case of smell and hearing responses take place “in time” (διὸ εὐλόγως αἱ τούτων ἀντιλήψεις ἐν χρόνῳ), because it takes time for auditory and olfactory stimuli to ‘add up’ until they trigger a perceptual response (see also [Alexander of Aphrodisias], *Problems* 1.38.12–16). However, in the case implied here by Theophrastus different responses are caused by different objects of the same sense (higher and lower notes).

The last remark leads us to the question of what exactly this is all about. It should not be forgotten that Theophrastus' focus is neither on the nature of pitch as such, nor its variation; this was rather Porphyry's concern (see above, pp. 45–49), and should not be confused with our philosopher's original agenda. Theophrastus' topic is defined quite clearly at the opening: ἔστι γὰρ τὸ γινόμενον κίνημα μελωδητικὸν περὶ τὴν ψυχὴν σφόδρα ἀκριβές, ὅποταν φωνῇ ἐθελήσῃ ἐρμηνεύειν αὐτό, τρέπει μὲν τήνδε, τρέπει δ' ἐφ' ὅσον οἷα τ' ἔστι τὴν ἄλογον τρέψαι, καθ' ὃ ἐθέλει "For the movement productive of melody, when it occurs in the soul, is very accurate, when it (the soul) wishes to express it (the movement) with the voice. It (the soul) turns it (the voice), and turns it just as it wishes, to the extent that it is able to turn that which is *alogos*" (716.7–9). The subject matter is the movement which takes place in the soul and produces melody. This movement is not melody itself; it needs translating, as it were, into melody—this is what the verb ἐρμηνεύειν refers to.<sup>72</sup> Such translation is carried out by the soul, which is able to impress the desired direction on the voice<sup>73</sup> in a very accurate way, especially if we consider: *a*) that this operation involves only melody, without taking into account the words, if any, that are being sung (if we take ἄλογον as meaning "without words"), or *b*) that this voice is non-rational (if we prefer the other meaning).<sup>74</sup> That this is the real topic is confirmed by the last sentence of the fragment, which identifies the nature of music with a particular movement of the soul (716.130 μία δὲ φύσις τῆς μουσικῆς· κίνησις τῆς ψυχῆς κτλ.). Accordingly, since this movement triggers melody, and melody consists of intervals between different-pitched notes, the issue of pitch variation is to be dealt with—but as a parenthetic argument, as detailed and intriguing as it may be.

Bearing this in mind, one might perhaps look at the whole text from a different perspective. If we read the fragment as though Theophrastus wanted to refute the quantitative theory and put forward a qualitative one in its stead, we must conclude that his positive views are much less clear than his negative ones; but things change if we assume that he had a different purpose. One of the puzzling features of this text is that after the initial statement on the κίνημα

72 A very well articulated version of this interpretation is found in Barker (1985) pp. 312–314.

73 I agree with Barker (1985) p. 312 that the only subject for ἐθελήσῃ can be ἡ ψυχὴ and τήνδε refers to τὴν φωνήν.

74 On the interpretation of ἄλογος here see Barker (1985) pp. 322–323; Matelli (1998) pp. 203 n. 5. I personally find option *a*) more suitable to the context; besides, the hypothesis that in Theophrastus' view the outcome of the "melopoeitic movement" of the soul was a melody without words might find confirmation in text 720.3 (q.v.; see also pp. 94–95), but the text (from Philodemus' *On Music*) is so badly damaged that there can be no certainty. See also my remarks on text 722.

μελωδικόν one might expect an explanation of how melody is produced; what one gets instead is a discussion of what the principle of pitch is and why we perceive pitch the way we do. To account for this, one could assume that the procedure with which the soul translates its movement into melody operates through the same principle—the ἰδιότης—which is at work when notes and their differences are heard. Thus, understanding the ultimate cause of pitch variation would be tantamount to going backwards through what soul does when it intends to utter a μέλος. Theophrastus' discourse seems therefore to belong more to the field of psychology than to that of acoustics or harmonics; one might suggest that it was for this reason, rather than out of intellectual dishonesty, that Ptolemy decided not to make any mention of it.

### *Textual Remarks*

After John Wallis's *editio princeps* of Porphyry's *Commentary* (1699), the fragment featured in the two Theophrastean editions by Johann Gottlob Schneider (1821) and Friedrich Wimmer (1862); it was then dealt with by Ingemar Düring in his edition of Porphyry (1932). Further textual suggestions were made by Bengt Alexanderson (1969) and Andrew Barker (1977, on ll. 16–49 = p. 75.23–76.29 Raffa = p. 62.1–33 Düring), who also published the first English translation of the whole fragment (1989 pp. 111–118). This translation, with some important adjustments, was reprinted in FHS&G edition (1992). A few years later Christiaan M.J. Sicking (1998) proposed a different English version with some new textual remarks. Some of the emendations proposed by Alexanderson and other scholars were accepted in the new English version of Porphyry's work by Andrew Barker (2015) and in my own edition (Raffa 2016c). For each passage I am going to discuss, I will print the Greek text according to my edition and Andrew Barker's latest translation.

#### ll. 20–21

ὥστε καὶ εἰ χροῖα χροῖας ποσότητι διαφέρει, ὅπερ ἀνάγκη, καὶ μέλος ἢ μέλους (μέρος add. Wallis) εἶη, κτλ. “Thus even if one colour differs from another in quantity, as it must, it must be a melody or part of a melody”.

The mss. have ὥστε καὶ ἡ (εἰ *m*) χροῖα χροῖας κτλ. Reading εἰ instead of ἡ was first suggested, tentatively, by Alexanderson (1969) p. 32 and then accepted in FHS&G's text. Sicking's solution (1998 p. 98) might be correct as well: ὥστε καὶ ἡ (χροῖα, εἰ) χροῖα χροῖας ποσότητι διαφέρει, ὅπερ ἀνάγκη, καὶ μέλος ἢ μέλους μέρος εἶη κτλ. “Hence color also, if colour would differ from colour by quantity, which is inevitable, will be a melody or part of a melody too” (ibid. p. 102). Sicking maintains the received διαφέρει against Düring's διαφέρει.

## I. 28

ἀλλ' εἰ ἄλλο τι φθόγγος ἢ ἀριθμός, κτλ. "But if it (= every interval) were nothing but a number, etc."

The received reading ἢ ἀκουστός hardly makes good sense. What we would expect here is a reaffirmation of what has been said in the previous clause, that is, that a note is one thing, and the plurality that refers to it is another. There seems to be no point, in this context, in holding that a note is something different from an audible object; hence the emendations. Barker's reading ἢ ἀριθμός certainly makes better sense than Wallis's ὁ ἀριθμός and Schneider's ὁ ἀκουστός. However, Marlein van Raalte's conjecture ἢ ἀκουστός (Sicking 1998 p. 98 n. 10) should be taken into account since it has the advantage of keeping textual intervention to a minimum while making a sense compatible with the context: "But if a note is something different (*scil.* from the plurality related to it) *qua* audible, etc."

## II. 35–36

[ἡ φωνή] δ' ἢ ὀξυτέρα τινὸς ἢ βαρυτέρα ἐστίν, ἔχει τὸ ποσὸν ἢ φωνή, εἰ δ' ἄλλο τι, οὐκ ἔτι ἔσται φωνή τις. "And if a voice is higher or lower than another, the voice possesses quantity, but if it possesses something else (and not quantity) it will not yet be a voice".

Düring's text and punctuation (ἡ φωνή δ' ἢ ὀξυτέρα τινὸς ἢ βαρυτέρα ἐστίν. ἔχει τὸ ποσὸν ἢ φωνή, εἰ δ' ἄλλο τι, οὐκ ἔτι ἔσται φωνή τις) do not seem to do justice to the sense here. The point should be that, if we accept the quantitative assumption, then the difference between high and low would be a matter of quantity, because if we admitted any other kind of difference (in the framework of this theory), there would be no sound any more. Accordingly, the clause ἔχει τὸ ποσὸν ἢ φωνή should be linked to the previous one, since it only makes sense if it refers to the theory that is being rejected (cf. Alexanderson 1969 p. 35). Moreover, the hypothetical εἰ δ' ἄλλο τι postulates that a parallel clause should occur before, hence the readings εἰ ὀξυτέρα κτλ. (Alexanderson; FHS&G) or εἰ φωνή δ' ἢ ὀξυτέρα κτλ. (alternative conjecture by Alexanderson). Alexanderson (1969) p. 35 suggests that the second ἡ φωνή is an emphatic albeit clumsy repetition of the first one. My opinion is that it is the other way round: the first ἡ φωνή seems to me an addition by someone who was not satisfied with the collocation of the subject at the end of the clause. I have therefore secluded it in my critical text, especially because its deletion does not affect the sense ([ἡ φωνή] δ' εἰ ὀξυτέρα τινὸς ἢ βαρυτέρα ἐστίν, ἔχει τὸ ποσὸν ἢ φωνή, κτλ.).



## ll. 42–44

ἴσαι γὰρ ἂν εἶεν αἱ ποσότητες, ὥσπερ εἰ συμμιγείη ἡ μέλαν λευκῶ, ἴσῳ ἴσον, οὐκ ἂν οἱ τοῦ λευκοῦ ἀριθμοὶ τῶν τοῦ μέλανος πλείους λέγοιντο, οὐδ' ἂν οἱ τοῦ μέλανος τῶν τοῦ λευκοῦ. “The quantities may be equal, just as when one mixes black with an equal amount of white, the numbers of the white would not be said to be more than those of the black, nor those of the black than those of the white”.

There is no apparent reason for keeping the disjunctive ἢ here and deleting it would be an easy solution. Alexanderson tries to maintain the text as it is and accounts for the structure of the sentence as a sort of anacoluthon, as though Theophrastus “intended to continue with ἡ γλυκὺ πικρῶ” (1969 pp. 35–36); which might make sense, especially if we consider how the argumentation goes on. It is perhaps worth developing this suggestion into an integration (ὥσπερ εἰ συμμιγείη ἡ μέλαν λευκῶ <ἢ γλυκὺ πικρῶ>, κτλ.), but I did not think it necessary to add anything of this sort to my apparatus.

## ll. 55–57

ταύτῃ ἔοικεν ἔν τε τοῖς ἀύλοις εἰς τὸ ἐμπνεῦσαι βία τῷ στενωτέρῳ δυνάμεως δεῖν καὶ εἰς τὸ τῷ εὐρυτέρῳ, ἵνα πληρωθῇ. “In *auloi*, similarly, power is needed to blow forcefully into either a narrower or a wider one (= windpipe), so as to fill it”.

ταύτῃ ἔοικεν is Düring’s suggestion for coping with the mss’. nonsensical reading τὸ αὐτῇ εἴκειν and is preferable to Schneider’s τοιαύτης ἔοικεν. Sicking (1998) p. 99 maintains the received text, albeit between two *cruces desperationis*. The overall sense is clear anyway.

## l. 62

ἐν δὲ ταῖς χορδαῖς τὸ ἴσον κατὰ θάτερον δῆλον· ὅσῳ γὰρ εὐτονωτέρα ἡ τῆς λεπτοτέρας τάσις, τοσῶδε ἡ ἀνείσθαι δοκοῦσα παχυτέρα· κτλ. “In strings the equality on each side is obvious; for by whatever amount the tension of the thinner is tighter, the one that seems to be slacker is thicker by the same amount, etc.”

Although there is no textual problem regarding the participle δοκοῦσα, Sicking (1998) p. 99 puts it between *cruces* on the grounds that, since Theophrastus is trying to draw evidence for his assumptions from the empirical observation of strings, it would have been contradictory to raise doubts about the trustworthiness of the observation itself at this point; for the same reason, he is not satisfied with Barker’s translation “the one that seems slacker”.<sup>75</sup> Hence his suggestion that this is an interpolation by “a reader who reckoned with the possibility of an observation error” (1998 p. 122). However, it should be borne

75 Of course, Sicking refers to Barker’s translation printed in FHS&G (1992) p. 567.

in mind that a thicker string does not have to be actually slacker than a thinner one to produce a lower note, since thickness alone causes a lower sound. As a consequence, an observer hearing a lower note produced by a thicker string may erroneously assume, on the basis of common experience, that the string *also* has less tension; and admitting this does not in any way affect the assumption at stake here, which is, that there is a sort of compensation of forces between high and low sounds, whereby a kind of balance is maintained in any case. Moreover, the Greek also allows an alternative meaning, as “the string that is perceived as being lower in pitch (and is lower indeed)”. In either case, there is no reason for doubting the authenticity of the received text.

## ll. 69–74

καὶ γὰρ εἰ, ὥς φασιν, καὶ πορρωτέρω ἀκούεται ὁ ὀξύτερος φθόγγος τῷ πορρωτέρῳ διὰ τὴν τῆς κινήσεως ὀξύτητα διϊκνεῖσθαι ἢ (τῷ add. Düring) διὰ τὸ πλῆθος γίνεσθαι, οὐκ ἂν ποτε γένοιτο σύμφωνος οὗτος πρὸς τὸν βαρύν, οὐθ' ὅτε μόνος ἀκούεται, εἴ γ' ἐν ἀμφοτέροις ἢ συμφωνία, οὐθ' ὅτε ἐκλείπει ὁ βαρύτερος. “And if, as people say, the higher note is also heard at a greater distance because it travels further due to the sharpness of its movement, or due to its arising as a consequence of its plurality, then this note would never be concordant with the low note, either when it alone is heard, given that the concord consists in both of them, or when the lower note is ceasing”.

ἢ (τῷ) διὰ τὸ πλῆθος γίνεσθαι: the received text ἢ διὰ τὸ πλῆθος γίνεται might make correct sense (“or because a plurality arises”, FHS&G 1992 p. 569 n. 7; the plurality being, of course, that of the larger numbers connected to the higher note); nevertheless, many have been tempted to make amendments. Wallis suggested a very economical εἰ διὰ τὸ πλῆθος γίνεται (“if it—*scil.* the higher note—arises because of the plurality”: see also Höeg 1934 p. 322 on the possibility of deleting the sole verb); Alexanderson reads ἦν (*scil.* τὴν ὀξύτητα) διὰ τὸ πλῆθος γίνεσθαι (1998: 36; his conjecture is erroneously printed as ἦν κτλ. in FHS&G’s apparatus and in Sicking 1998 p. 99), thus interpreting the clause as a relative to be connected to φασιν at l. 70: “which (*scil.* the sharpness of the movement of the higher note), they say, arises as the result of plurality”. Quite drastically, Sicking deletes the whole clause as a “marginal gloss” (1998 p. 125). Düring, followed by FHS&G, gives perhaps the best solution as his text creates the parallelism τῷ ... διικνεῖσθαι ἢ (τῷ) ... γίνεσθαι.

οὐθ' ὅτε ἐκλείπει ὁ βαρύτερος: Alexanderson (1969) p. 37 suggested that the words ὁ βαρύτερος should be deleted; Barker accepted the proposal in (1989) p. 115 with n. 27 and in the text printed in FHS&G (1992) p. 569. As a result, the subject of ἐκλείπει would have been ὁ ὀξύτερος φθόγγος at l. 70; but one might doubt if this athetesis does any good to the text. Theophrastus is trying to build

a threefold argument to show that, according to the quantitative approach, no consonance between two simultaneous notes would ever be audible, because: *a*) if the higher note has a sharper movement than the lower one and is capable of travelling further because of its greater numbers, then there should be an amount of time in which it would be heard alone, and during that time there would be no consonance because consonance implies simultaneity (ll. 72–73); *b*) when one of the two notes ceases (the higher one in Alexanderson's version, the lower in the received text), there would be no consonance either, because the other note would no longer be audible; and finally *c*) if the higher note is more powerful (σφοδρότερος, l. 76) than the lower one, when they are heard simultaneously the former should overwhelm the latter (κατισχύει, l. 77), and there would be no consonance as well, for the same reasons. But, the argument goes, consonance does exist, so the theory must be wrong. Considering the whole reasoning, not only is there no cogent reason to delete ὁ βαρύτερος, but there are at least two good reasons to keep it where it is: firstly, if the higher note travels further, it makes sense that the lower one, not the higher, is not audible anymore because it runs out of power and is left behind at some point in space (ἐκλείπει); secondly, if the higher note overpowers the lower, it is hardly comprehensible how the ceasing of the higher note itself could pass unnoticed (ἀνάγκη γὰρ κατὰ τὴν λεληθυῖαν ἐκλειψιν μηκέτ' ἀκούεσθαι, ll. 74–75). It might be concluded, then, that Sicking (1998) p. 100 is right in maintaining the received text. Both Barker (2015) p. 212 and myself (Raffa 2016c p. 77) have restored the mss'. text.

#### ll. 74–78

ἀνάγκη γὰρ κατὰ τὴν λεληθυῖαν ἐκλειψιν μηκέτ' ἀκούεσθαι· οὔτε μάλιστα ἄμφω ἀκούονται· καὶ τότε γὰρ ὁ ὀξύς σφοδρότερός ἐστιν, ἅτε οἶός τε ὦν καὶ πόρρω διΐκνεισθαι· φθάνει τε οὖν τὸν βαρὺν καὶ κατισχύει, ὥστε σφετερίζεσθαι τὴν αἴσθησιν αἰ, <καὶ addidi> μὴ μειονεκτοῦντος τοῦ βαρυτέρου. "... since because of its imperceptible cessation it (= the lower note) must no longer be heard, or when both are most clearly heard, for even then the high note is more vigorous, since it is capable of travelling further. Thus it obscures and overpowers the low note, so that it appropriates the perception to itself, even while the lower note is not diminished".

According to the theory that is being rejected, the higher note, being stronger (see above), will always appropriate the perception for itself at the expenses of the lower one, (even) if the latter is *not* reduced in power. The text makes perfect sense, *pace* Sicking (1998 p. 100) and Schneider, who follow T in deleting the negation μὴ, and Wallis, who read μὴν. Moving the comma before αἰ would perhaps help clarify the meaning: φθάνει τε οὖν τὸν βαρὺν καὶ κατισχύει, ὥστε

σφετερίζεσθαι τὴν αἴσθησιν αἰεὶ, μὴ μειονεκτοῦντος τοῦ βαρυτέρου. In my critical text I have added καὶ between αἰεὶ and μὴ, which in my view solves the problem. The conjunction καὶ might have been mistaken by a copyist for a dittography of the preceding αἰεὶ and therefore omitted.

## II. 87–90

καὶ γὰρ δὴ γε, εἰ καὶ πορρωτέρω ἐκινεῖτο, οὐ διὰ τὸ πλείους κινεῖσθαι ἀριθμούς ὁ ὀξύτερος, ἀλλὰ 6 διὰ τὸ σχῆμα, ἐπειδὴ ὁ μὲν ὀξὺς ἦχος πρόσω μάλλον φέρεται καὶ ἄνω, ὁ δὲ βαρὺς περίξ κατ' ἴσον μάλλον. “And indeed, even if the higher note does move to a greater distance, it is not because it moves in accordance with more numbers but because of its shape, since a high note travels more forwards and upwards, while a low note travels more equally all about”.

Sicking (1998) p. 126 deletes ὁ ὀξύτερος as “a marginal gloss by a reader who, understandably, looked for a subject to go with ἐκινεῖτο and κινεῖσθαι”. However, there appears to be no reason to exclude that Theophrastus might have decided, understandably, to write out the subject himself. The reading is unanimously present in the manuscript tradition, does no harm to the text and should be maintained.

## I. 91–92

Δῆλον δὲ καὶ ἐκ τῶν ὀργάνων· τὰ μὲν γὰρ ὑπὸ κέρας καὶ τὰ σὺν τῷ χαλκῳματι περιηχητικώτερα, ἅτε τοῦ ἤχου ἴσου ἴσου περὶ πάντων γινομένου.

τοῦ ἤχου ἴσου ἴσου περὶ πάντων γινομένου is the mss. reading and there is nothing wrong with it. Düring simply dropped one of the two ἴσου in his edition and corrected the text a few years later (1934 p. 18). However, his correction seems to have escaped any other scholar who dealt with the text later on—including myself, in the non-critical text printed in my Italian edition of the *Commentary* (Raffa 2016a p. 434; but the correct text is found in Raffa 2016c p. 78). This passage should therefore be translated “This is clear also from instruments. For those with a horn and those with a bronze attachment are more resonant round about, since the sound, *being equal*, arises equally all round”.

## II. 111–116

οὐδὲ γὰρ ἡ ἐκμέλεια τῆς ἐμμελείας αἰτία, ἐπειδὴ οὐκ ἂν γένοιτο ἐμμέλεια, εἰ μὴ ἡ ἐκμέλεια παραπέμποιτο, οὐδ' ἂν τι ἄλλο ἐπιστημονικὸν γένοιτο, εἰ μὴ τοῦναντίον ἀνεπιστήμον τοῦ ἐπιστήμονος· οὐδὲ γὰρ ὡς ὃν αἴτιον ἀνεπιστήμον τοῦ ἐπιστήμονος, ἀλλὰ παραπεμπόμενον τῷ μὴ κωλύειν, ὥστ' οὐδὲ τὰ διαστήματα τοῦ μέλους αἰτία ὡς ποιοῦντα, ἀλλ' ὡς μὴ κωλύοντα. “For the unmelodic is not a cause of the melodic (merely) because the melodic would not arise if the melodic were not eliminated. Nor could there be anything capable of knowing if the opposite of

that which knows, that which is ignorant, were not (eliminated); for it is not by its existence a cause of that which knows, but, when it is eliminated, by its not preventing it. Thus neither are the intervals the causes of melody as producing it, but as not preventing it”.

It is undeniable that this reference to ignorance and the knowledgeable comes quite unexpected. However, the massive athetesis suggested by Sicking (1998) p. 101 (οὐδ’ ἄν τι ἄλλο [ἐπιστημονικὸν] γένοιτο, εἰ μὴ τοῦναντίον [ἀνεπιστήμον τοῦ ἐπιστήμονος]· οὐδὲ γὰρ ὡς ὃν αἴτιον [ἀνεπιστήμον τοῦ ἐπιστήμονος], ἀλλὰ κτλ.) on the assumption that the passage was interpolated by a reader who wanted to “elucidate a rather condensed expression by adding an example” (ibid. p. 130), makes too invasive an intervention and has no justification in the manuscript tradition. Barker’s interpretation (2015 p. 217 with n. 230) is probably right. In this case, the only textual difficulty would be how to make sense of the adjective ἄλλο, because the melodic (ἐμμέλεια) can hardly be considered something capable of knowing; however, the problem might be easily overridden either by deleting ἄλλο or, perhaps better, by emending it into ἄλλα or τᾶλλα, as if our philosopher were passing from a specific musical argument to a more general one: “For the melodic is not a cause of the unmelodic (just) because the melodic would not come into being unless the unmelodic were omitted; *for the rest*, there could not be anything capable of knowing etc.”. It has to be admitted, though, that this would be quite an unusual position for the adverb.

#### I. 116–117

εἰ γὰρ τις ἅμα φθέγγοιτο κατὰ τὸ συνεχὲς καὶ τοὺς μεταξὺ τόπους, ἄρ’ οὐκ ἐκμελῆ προΐτο φωνήν; “For if someone were at the same time to utter the continuum of the intervening positions as well, wouldn’t the voice he produced be unmelodic?”

Düring’s text and the text printed in FHS&G (1992) have ἄρ’ οὖν, which is the mss.’ reading. Sicking’s emendation (1998 p. 101) ἄρ’ οὐκ makes better sense and is adopted both by Barker (2015 p. 216) and myself.

717     **Porphyry, *Commentary on Ptolemy’s Harmonics* 1.5, p. 119.10–13**  
           **Raffa = p. 96.21–23 Düring**

#### *Context in Porphyry*

Chapter 1.5 of Ptolemy’s *Harmonics* deals with the Pythagorean theory of musical concordant intervals. We are told that the Pythagoreans started from two different series, that of mathematical ratios and that of musical intervals; for each of these they established a criterion of excellence from which they drew two separate lists of items, proceeding from what was more perfect towards

what was less. They arranged the concords according to their closeness to unison, so that the best was the octave, followed by the fifth, the fourth, the twelfth (an octave plus a fifth), and the double octave. Their hierarchy of the ratios, on the other hand, was based on a comparison between the lesser term of each ratio and the so-called “excess” (Gr. *ὑπεροχή*), which was the difference between the two terms of the ratio. Since all the ratios used by the Pythagoreans for expressing the fundamental concords were in the form  $(n+1)/n$ —the so-called epimoric form, such as in  $2/1$ ,  $3/2$ ,  $4/3$ , etc.—their *ὑπεροχή* always equalled 1. In comparing the lesser term to the excess, they assumed that the closer this relationship was to identity (i.e. unity, number 1), the better was the ratio. Accordingly, the ratio  $2/1$  came first, because its excess equalled 1 ( $2-1 = 1$ ), which is the same as its lesser term; next came the ratio  $3/2$ , in which the excess (1) was a half of the lesser term; in the ratio  $4/3$  the excess was a third of the lesser term, and so on. Only once these separate series had been established was each element of the one associated to its counterpart in the other: the ratio  $2/1$  to the octave, the ratio  $3/2$  to the fifth, etc.

Porphphy's commentary on this chapter starts with a lengthy discussion of the terms *λόγος* and *διάστημα* and the possibility that they are used as synonyms.<sup>76</sup> After that he comments on the first eight lines of the chapter, in which Ptolemy lists the concords accepted as such by the Pythagoreans. According to the Pythagorean and Platonic traditions (represented in Porphyry's text by the two commentaries on Plato's *Timaeus* by Adrastus and Aelianus), an interval is concordant if the two notes that form it, when played simultaneously, give the hearer a pleasant impression which is referred to in various ways—e.g. as sameness, unity (*ἐνότης*), affinity (*συμπάθεια*), smoothness (*λείοτης*), and the like. This leads directly to the question of how many concords there are. Ptolemy only counts six of them, from the fourth to the double octave including the eleventh (whose ratio,  $8/3$ , is not epimoric), whereas Aristoxenus and others count eight, including the eighteenth (double octave plus fourth,  $4/1 \times 4/3 = 16/3$ ) and the nineteenth (double octave plus fifth  $4/1 \times 3/2 = 6/1$ ); these authors also distinguish, we are told, between concords “simple” (*ἀπλᾶ συμφωνίαι*) and “compound” (*σύνθετοι*). There is no doubt that every concord past the octave is a compound; as for the octave itself, it seems that it was deemed a compound by οἱ παλαιοί (p. 119.2 Raffa = p. 96.13 Düring), while—at least according to Porphyry—it was included among the simple concords along with the fourth and the fifth by Thrasyllus in his work *On the Heptachord*.<sup>77</sup> It is at this stage

<sup>76</sup> See Raffa (2013).

<sup>77</sup> Porphyry's text runs as follows (p. 119.5–9 Raffa = p. 96.16–20 Düring = Thrasyllus, test. 15b

that Theophrastus' testimony is cited, saying that the Pythagoreans used to call the fourth συλλαβή, the fifth δι' ὀξειᾶν and the octave ἁρμονία. Then Porphyry discusses the origins of the ancient expressions συλλαβή and δι' ὀξειᾶν (pp. 119.19–120.3 Raffa = pp. 96.29–97.8 Düring).

### *The Ancient Names of Musical Concords*

The expressions συλλαβή, δι' ὀξειᾶν and ἁρμονία are generally thought to date back to an early stage of Greek music, prior to—or independently of—the rise of scientific harmonics. They have no relation to the measurement of intervals in mathematical terms and probably belong to the jargon of practical musicians,<sup>78</sup> συλλαβή referring apparently to the interval that can be “grasped” (συλλαμβάνω) by the hand of a lyre-player in its basic position,<sup>79</sup> δι' ὀξειᾶν<sup>80</sup> alluding to the fact that the fifth is located in the highest part of the lyre's pitch range, literally “through the highest strings”. Finally, ἁρμονία presumably hints at the octave as the “putting together” (σύστημα) of a fourth and a fifth (see above).

Apart from Porphyry, our evidence for these ancient names comes from Nicomachus (e.g. *Manual of Harmonics* 9 pp. 252.17–253.3 Jan), Stobaeus (*Anthology* 1.21.7D.14–15 Wachsmut), and Aristides Quintilianus (*On Music* 1.8.47–49 p. 15.8–10 Winnington-Ingram). Nicomachus and Stobaeus explicitly draw upon Philolaus (fr. 6A Huffman), while Aristides, like Porphyry, attributes such usage to “the ancients”, with no further specification. The issue of the

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Tarrant): Θράσυλλος δ' ἐν τῷ Περὶ ἑπταχόρδου ἀπλᾶς καὶ συμφώνους οὐ μόνον τὴν διὰ τεσσάρων καὶ διὰ πέντε κατηρίθμηνεν, ὥς οἱ πλείους τῶν μουσικῶν, ἀλλὰ καὶ τὴν διὰ πασῶν. λέγει γὰρ οὕτως· τῆς δὲ συμφωνίας ἐστὶν εἶδη πλείω· ἡ μὲν γὰρ λέγεται διὰ πασῶν, ἡ δὲ διὰ τεσσάρων, ἡ δὲ διὰ πέντε. συντάσσεται δ' οὖν ἐν ταῖς ἀπλᾶς (for the sake of my argument, I have taken out Düring's quotations marks). “But Thrasyllus, in his *On the Heptachord*, counted not only the fourth and the fifth as both simple and concordant, as most of the musical experts do, but also the octave. For he speaks as follows: ‘There are many forms of concord; one is called the octave, another the fourth and another the fifth.’ It is therefore included among the simple concords” (tr. A. Barker, with the only difference that I prefer reading Περὶ ἑπταχόρδου instead of ἑπταχόρδων). I am not convinced that Düring, and Tarrant after him, are right in having the quotation stretch up to ἀπλᾶς. The discussion on the nature of the octave belongs to Porphyry, not to Thrasyllus. Accordingly, I think it more reasonable that Thrasyllus' words end at ἡ δὲ διὰ πέντε; what follows sounds to me like an inference by Porphyry, as if he were concluding “therefore (οὖν) he (Thrasyllus) lists it (the octave) in the simple concords”.

78 Barker (2007) p. 22.

79 Thus Barker (2007) p. 264; *contra*, Hagel (2009) p. 373 n. 22.

80 The Doric form for δι' ὀξειῶν *scil.* χορδῶν; Zanoncelli (1990) p. 196 n. 3.

authenticity of Philolaus' fragment is beyond our concern here;<sup>81</sup> it is worth noticing, however, that *a*) the sources which mention Philolaus (Nicomachus and Stobaeus) have the Doric form δι' ὀξειᾶν (Stobaeus also has συλλαβά), while Aristides has the Atticized δι' ὀξειῶν; *b*) none of the extant sources credits Philolaus with any explanation for those names; and *c*) none of the sources but Porphyry mentions Theophrastus with reference to this matter. As for Porphyry, he has δι' ὀξειᾶν and συλλαβή, like Nicomachus; however, if he had found a reference to such an important authority as Philolaus in his source, he would certainly have known better than to omit it, especially if we consider that he quotes so many authors by name in this passage. Accordingly, it is highly improbable that he had access to the same texts as Nicomachus; it stands to reason that he used a different source, perhaps the same one as Aristides did.

Is it possible to pin down this source? Düring tentatively suggests ("crediderim", app. ad loc.) that the whole batch at p. 96.21–28 comes from Aelianus, probably on the grounds that Porphyry quotes Aelianus' explanation for the expressions συλλαβή and δι' ὀξειᾶν (pp. 119.19–120.3 Raffa = pp. 96.29–97.8 Düring) immediately after this passage. This is very plausible indeed, although I would suggest that it does not tell the whole story. Let us focus on what Aelianus is reported to have said on the interval of fourth: "the Pythagoreans called the concord of a fourth *syllabē* ... because it is the first concord and has the staus of a syllable".<sup>82</sup> The argument sounds somehow circular and cryptic; however, it may become clearer if we read it in the light of two passages from Theon of Smyrna's *On the Usefulness of Mathematics*. In the first one (pp. 49.6–50.3 Hiller) Adrastus is said to have compared the syllables of written language to the intervals of music; in the second, even more to the point, it is stated that "what admits division and section is called a συλλαβή, not an element".<sup>83</sup> Interestingly enough, in the latter passage Theon might be quoting Eratosthenes, whose work he mentions at the beginning of the paragraph (p. 82.22–23 Hiller). It seems, therefore, that Aelianus' obscure phrasing presupposes Adrastus' and perhaps Eratosthenes' reflections on consonances; accordingly, there are some good reasons for suggesting that Porphyry's source at p. 119.1–13 Raffa = p. 96.12–23 Düring is indeed Eratosthenes via Aelianus (and perhaps also with Adrastus as an intermediate source). If this is true, we may think of a scenario in which the ancient names of the concords were handed down to the theorists of 11 and

81 See, e.g., Zanoncelli (1990) pp. 196–198 n. 4; Huffman (1993) pp. 147–156; Barker (2007) p. 263 n. 1.

82 P. 119.19–21 Raffa = p. 96.29–30 Düring συλλαβὴν δ' ἐκάλουν οἱ Πυθαγόρειοι τὴν διὰ τεσσάρων συμφωνίαν, ὡς Αἰλιανὸς φησιν, ὅτι πρώτη ἐστὶ συμφωνία συλλαβῆς τάξιν ἔχουσα (tr. A. Barker).

83 τὸ γὰρ διαίρεσθαι καὶ τομὴν ἐπιδεχόμενον συλλαβὴ λέγεται καὶ οὐ στοιχεῖον p. 83.6–7 Hiller.



III centuries AD through two different threads. The first one originates directly from Philolaus himself and goes all the way to Nicomachus and Stobaeus, its distinctive features being the references to Philolaus' name and to the notes between which the intervals are to be found; the other one, which no longer retains either Philolaus' name or the reference to notes and refers generically to οἱ παλαιοί, can be traced back to as early as Eratosthenes and seems to have reached Porphyry through Adrastus and Aelianus.

Did Porphyry find the reference to Theophrastus in his source or did he add it on his own? It is true that Porphyry had access to Theophrastus' work, or at least to some works of his, independently of Aelianus (this seems to be the case, for instance, with text 716); however, if *a*) in the passage at hand Porphyry is citing from Aelianus, and if *b*) Porphyry's Aelianus is to be identified with the II–III cent. AD writer Claudius Aelianus, as seems reasonable (Barker 1989 p. 230), then there is no doubt that this Aelianus knew Theophrastus' work very well<sup>84</sup> and it is therefore plausible that Porphyry took the reference to Theophrastus from him.

### *Contents and Textual Remarks*

At first sight there is nothing particularly problematic with this short text; but things change if we pose the question: what exactly is Theophrastus credited with having said here? The text as it stands is ambiguous because it fails to clarify whether he is referring to all the ancient names of the concords or the octave alone. The question is by no means a Lilliputian one, because if we are to attach Theophrastus' testimony to all the names, we should assume that he was part of the tradition which handed down those names; moreover, since there is no mention of Philolaus here (see above), Theophrastus would belong to the same branch of that tradition as Eratosthenes (see above)—indeed, he would prove to be its most ancient representative. It is also possible, on the other hand, that his words are to be taken as referring only to the octave, namely to the fact that the octave is a σύστημα; in which case one should be more cautious in linking him to that tradition.

The answer to the question depends on how we interpret the syntax of the text, which unfortunately appears to be corrupted in some way.<sup>85</sup> In fact, the double accusative τὴν δὲ διὰ πασῶν ... ἀρμονίαν occurring in connection to

84 The philosopher's name occurs several times both in the *On the Nature of Animals* (sixteen occurrences, all of which as a source) and in the *Various History* (six times, two of which as a source; cf. also FHS&G's *Index*, Part Two pp. 629–630).

85 As suggested by Andrew Barker (see app. ad loc. with n. 1).

the dative τῷ συστήματι seems quite difficult to account for. I have argued<sup>86</sup> that the text could be emended, very economically and perhaps effectively, by reading τῇ δὲ διὰ πασῶν (dative) instead of the received accusative τὴν δὲ διὰ πασῶν. Thus the whole sentence would run as follows: οἱ μὲν Πυθαγόρειοι τὴν μὲν διὰ τεσσάρων συμφωνίαν συλλαβὴν ἐκάλουν, τὴν δὲ διὰ πέντε δι' ὀξειᾶν· τῇ δὲ διὰ πασῶν—τῷ συστήματι, ὥς καὶ Θεόφραστος ἔφη—ἔθεντο ἀρμονίαν “the Pythagoreans called the concord of fourth συλλαβή and that of fifth δι' ὀξειᾶν; to the octave—that is, the σύστημα (of the former and the latter) as Theophrastus also said—they gave the name ἀρμονία”. If my reading is correct, Theophrastus’ testimony should be limited to the fact that the octave is a compound of the fourth and the fifth, and nothing more.

## 2 Musicians

Theophrastus’ interest in musicians is testified by the title of a one-book treatise *Περὶ μουσικῶν* mentioned in Diogenes Laertius’ catalogue (text 1.260 = 714.2) and a very short quotation in Athenaeus on an aulete from Catania called Andron (text 718). Obviously, no firm conclusion can be drawn from such meagre evidence; however, it seems that Theophrastus’ conception of music as a movement of the soul (texts 716, 721B) did have bearings on his approach to the study of musicians and their activity. As far as we can tell, he basically saw musicians as a particular category of *performers*, and his main focus was on the ways in which they were able to convey the movement that comprises music. When seen in this light, singing or playing a melody on the *aulos* or any other instrument not only involves musical skills, but is also a matter of delivery, ὑπόκρισις. The ability to communicate the inner structure of what is being performed is something that links the musician to the orator and the actor. On the other hand, the testimony on Andron also shows another trait typical of the author of the *Περὶ εὐρημάτων*, which is an interest in “firsts”.<sup>87</sup>

86 Raffa (2014a). In support of my conjecture I cited Plato, *Theaetetus* 157B.9 ὃ δὲ ἀθροίσματι ἄνθρωπόν τετίθενται ... (“and this aggregate they call ‘man’”), where, interestingly, the writer refers to something that is composite, just like the octave.

87 On which see *Commentary* 9.2 pp. 135–142.

718 Athenaeus, *The Sophists at Dinner* 1.40 22C.5–8 (p. 49.15–18 Kaibel)*Context in Athenaeus*

This brief quotation from Theophrastus occurs in the context of a list of dances and dancers.<sup>88</sup> In the preceding lines different kinds of dances are mentioned, that are characteristic of various regions and cities of Greece; then references are made to Pindar addressing Apollo as Ὀρχηστής, “Dancer”,<sup>89</sup> and Homer or some of the Homerids describing the god as he, “holding a *phorminx* in his hands, played sweetly, stepping high and dexterously”.<sup>90</sup> Next comes a quotation from a dance scene, attributed to Eumelus (or Arctinus), in which Zeus himself is portrayed while dancing “among them”.<sup>91</sup> Then Andron of Catania is referred to as a sort of πρῶτος εὐρετής of the *aulos*-playing accompanied by rhythmical movements of the body, and after him and Cleolas of Thebes, who is likely to have been an aulete as well, some other human dancers are listed: a Bolbus,<sup>92</sup> Zeno of Crete,<sup>93</sup> and finally a Theodorus and a Chrysippus, whose names occur, according to Athenaeus, in a letter of Alexander the Great to his satrap Philoxenus. Since those mentioned after Cleolas seem to have been professional dancers (ὀρχησται ... ἐνδοξοί) rather than musicians, Andron and Cleolas turn out to be the only musicians—or at least the only human ones, Apollo obviously counting as a musician too—in a list which is apparently organized as a descent from mythical and divine examples towards human and historical figures arrayed in a sort of chronological order.<sup>94</sup>

*Andron of Catania and Cleolas of Thebes*

Andron of Catania is known from no other source.<sup>95</sup> Eustathius, who explicitly quotes this passage from the *Deipnosophistae*, omits the reference to him

88 See also *Commentary* 9.2 pp. 191–195.

89 Pindar, fr. 148 Snell-Maehler ὀρχήστ' ἀγλαΐας ἀνάσσω, εὐρυφάρετρ' Ἀπολλων.

90 [Homer], *Hymns* 3.514–516 ἦρχε δ' ἄρα σφιν ἄναξ Διὸς υἱὸς Ἀπόλλων | φόρμιγγ' ἐν χεῖρεσσιν ἔχων ἐρατὸν κιθαρίζων | καλὰ καὶ ὕψι βιβάζ.

91 Presumably the other gods: Eumelus, *Titanomachy* fr. 8 West = 6 Bernabè μέσσοισιν δ' ὠρχεῖτο πατὴρ ἀνδρῶν τε θεῶν τε; for the authorship and context of Eumelus' fragment see West (2003) p. 229 n. 10.

92 Cratinus, fr. 425 Kassel-Austin; Callias, fr. 30 Kassel-Austin.

93 Ctesias, fr. 688F.31 Jacoby.

94 This way of arranging mythical and human *exempla* seems not to be uncommon and is to be found, e.g., in Heraclides, fr. 157 Wehrli = [Plutarch], *On Music* 3 1131F.6–1132C.10 (I owe the suggestion to the courtesy of Egert Pöhlmann, *per litteras*).

95 Von Jan (1894); West (1992) p. 106. Curiously enough, a man of the same name, Andron of

and Cleolas.<sup>96</sup> An attempt was made<sup>97</sup> to establish a connection between Theophrastus' testimony and what is reported by Pollux concerning a dance accompanied by *aulos*-playing which was performed in Sicily in honour of Artemis Chitonea,<sup>98</sup> but the bare fact that Andron was a Sicilian and played the *aulos* in his particular way, even if we are to trust what Theophrastus—or whoever else, see below—says on the origin and meaning of the verb σικελίζειν, is not enough to link him to any specific cult. On the other hand, Andron's activity might also be placed in the context of festivals and musical contests, especially the Pythian ones, where his style might have allowed him to perform, *inter alia*, an effective rendering of the *nomos Pythikos*.<sup>99</sup>

There is no way of dating either Andron or Cleolas with any precision; one cannot but speculate as to what their place may have been in the development of ancient auletic tradition. However, I would suggest that we take the Theban aulete Pronomos as a reference point. He is said to have taught Alcibiades<sup>100</sup> and his floruit is generally placed around the middle of v cent. BC.<sup>101</sup> A πρώτος εύρετής himself, he is reported by Athenaeus<sup>102</sup> as having invented a device that allowed the aulete to play different scales (*harmoniai*) on the same pair of *auloi*. Pausanias confirms Athenaeus' testimony and adds that he was able

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Pellenes, son of Polyxenus, is recorded twice among the αὐληταί in the Soteric inscriptions from Delphi (second quarter of III cent. BC, see Collitz 1896 nos. 2564.16 and 2566.15), but of course there is no relationship to our Andron.

96 Eustathius, *Commentary on Homer's Odyssey* 1.306.1–8 Stallbaum "Οτι δὲ σεμνὸν ἡ ὄρχησις διειληπται μὲν καὶ ἐν ἄλλοις. δηλωτέον δὲ μετρίως καὶ νῦν, ὅτι τε ὀρχησται περιέδονται, Βολβός. Ζήνων ὁ Κρής, πάνυ Ἀρταξέρξης φίλος. καὶ τις Θεόδωρος. καὶ Χρύσιππος. καὶ ὅτι Πίνδαρος ὀρχηστήν τὸν Ἀπόλλωνα καλεῖ, δεικνὺς πρᾶγμα ἔνδοξον καὶ σοφὸν τὴν ὄρχησιν. φησὶ γάρ "ὀρχηστὰ ἀγλαΐας ἀνάστων εύρυφαρέτρ' Ἀπολλόν". καὶ Ὅμηρος δὲ ἡ τῶν τις Ὀμηρίδων ἐν ὕμνῳ Ἀπόλλωνος, φησὶν "Ἀπόλλων φόρμιγγ' ἐν χεῖρεσσ' ἔχων χάριεν κιθάριζε καλὰ καὶ ὕψι βιβάζ". καὶ τις ἕτερος τὸν Δία ὀρχοῦμενον παράγει. λέγων "μέσσοισι δ' ὀρχεῖτο πατήρ ἀνδρῶν τε θεῶν τε". ὁ δὲ ταῦτα παραδιδούς Ἀθήναιος ἱστορεῖ καὶ ὅτι τὸ ὀρχεῖσθαι σικελίζειν τοῖς παλαιοῖς ἐλέγετο, διὰ τὸ δηλαδὴ ὡς εἰκὸς ἐπιχωριάζειν τοῖς ἐν Σικελίᾳ.

97 Lawler (1943) pp. 67–68.

98 Pollux, *Onomasticon* 4.103.3–4 τὸ δ' Ἰωνικὸν Ἀρτέμιδι ὠρχοῦντο Σικελιώται μάλιστα. Athenaeus, *The Sophist at Dinner* 14.27.16–17 629E παρὰ δὲ Συρακοσίοις καὶ Χιτωνέας Ἀρτέμιδος ὄρχησῖς τίς ἐστιν ἴδιος καὶ αὐλησις.

99 A mimetic *bravura* piece in which the mythical fight between Apollo and the dragon was depicted by means of musical effects and perhaps enacted by the player's bodily movements; see Pollux, *Onomasticon* 4.84; Strabo, *Geography* 9.3.10.

100 Athenaeus, *The Sophists at Dinner* 4.84.8–11 184C.

101 Wilson (2007b) p. 143 suggests that his life spanned from ca. 470 to ca. 390.

102 Athenaeus, *The Sophists at Dinner* 14.31.5–7 631E.

to enchant his audience with his facial expressions and the movement of his whole body. Noticeably though, he does not state that he was the first to do so;<sup>103</sup> one might therefore suppose that someone else was, perhaps Andron—in which case Andron should slightly predate Pronomos and might be placed, at the latest, in the first half of v century. I am aware that for this argument to hold water, there should be evidence that Theophrastus and Pausanias drew upon the same list of “firsts”; however, since Pronomos was one of the most renowned musicians of his time and his innovations as a performer were well known throughout the Hellenic world, one might assume that Pausanias would have explicitly attributed to him the ‘invention’ of rhythmical movements if he had found any grounds for that in his sources, especially if one considers how attentive he was in general to the progress of techniques and technical skills.<sup>104</sup> Moreover, the figure of such an innovator as Andron fits quite well in the broader picture of musical life in Sicily in the early v century, when Syracuse and Gela organized huge festivals and contests on their own territory and sent choruses and performers to the main festivals held in metropolitan Greece in their eagerness to assert their prestige.<sup>105</sup> Accordingly, Cleolas is likely to have flourished in the latter half of v century,<sup>106</sup> and his mention after Andron might testify to the rise of the so-called Theban school in iv century.<sup>107</sup>

### *Gyrating Aulos-Players*

If, as suggested above, Theophrastus saw musicians as a particular category of ὑποκριταί, “actors” or “performers”, it is no surprise that his concern was mainly with auletes. Of all ancient musical instruments, the *aulos* was by far the most ‘physical’. Not only did *aulos*-playing entail a constant and deep contact between the instrument itself and the player’s body, but also the way in which sound was produced replicated the mechanism of human phonation. The reeds

103 Pausanias, *Description of Greece* 9.12.5.6–6.3 Πρόνομος δὲ ἦν ὃς πρῶτος ἐπενόησεν αὐλοὺς ἐς ἅπαν ἁρμονίας εἶδος ἔχοντας ἐπιτηδείως, πρῶτος δὲ διάφορα ἐς τοσοῦτο μέλη ἐπ’ αὐλοῖς ἠΰλησε τοῖς αὐτοῖς. λέγεται δὲ ὡς καὶ τοῦ προσώπου τῷ σχήματι καὶ τῇ τοῦ παντὸς κινήσει σώματος περισσῶς δὴ τι ἔτερπε τὰ θέατρα. “It was Pronomus who first devised *auloi* equally suited for every kind of melody, and was the first to play on the same instruments music so vastly different in form. It is also said that he gave his audience untold delight by the expression of his face and by the movement of his whole body” (tr. W.H.S. Jones-H.A. Ormerod, with slight adjustments).

104 Arafat (1992) pp. 392–393.

105 See, e.g., Wilson (2007a) pp. 354–366.

106 Cf. West (1992) p. 366 n. 39.

107 On which see, e.g., Roesch (1995) p. 128.

inserted into the instrument's mouthpiece, which enabled the *aulos* to play, were called γλῶτται or γλωττίδες, "tongues"; the word αὐλός itself was used, *inter alia*, to indicate the dolphins' blow-hole<sup>108</sup> and, most significantly, the air column inside the human windpipe with reference to the production of the different phonemes.<sup>109</sup> Comparisons between the structures of the *aulos* and the human vocal apparatus are frequent in ancient Greek writers (suffice it here to recall a very detailed one provided by Galen),<sup>110</sup> while the mishaps to which orators are exposed are often illustrated in rhetorical writings by means of metaphors or similes involving the *aulos* or its Latin counterpart, the *tibia*.<sup>111</sup> To complete the picture, a glance at the sections of Pollux' *Onomasticon* dedicated to the *aulos*-player, the orator and the actor reveals that the same adjectives were often used for describing the qualities and flaws of both the human voice and the instrument's 'voices'.<sup>112</sup> The *aulos* was, all things considered, more than a musical instrument: it was a sort of *Doppelgänger* of the performer's voice and an extension of his own body.<sup>113</sup>

Probably as a result of this intimate connection between the *aulos* and the body, indulging in bodily movements while playing, sometimes excessively, was a common practice and one well attested in ancient sources. Unfortunately, there is no evidence either as to what relation such movements had to dance in any real sense, nor whether there were clear boundaries between simple "rhythmical movements" and "dance". According to Aristotle, those who "twirl their bodies if they are to imitate a disc-throwing game, or hustle the coryphaeus if they are playing Scylla"<sup>114</sup> were bad players. We are not entitled, however, to

108 See, e.g., Aristotle, *Enquiry into Animals* 589B.19.

109 See Dionysius of Halicarnassus, *On Literary Composition* 14 p. 104.3 Aujac-Lebel.

110 Galen, *On the Usefulness of the Parts of the Body* 7.13 vol. 3 p. 561 Kühn (= vol. 1 pp. 407–408 Helmreich).

111 See, e.g., Quintilian, *Principles of Oratory* 11.3.20 *Nam ut tibiae eodem spiritu accepto alium clusis alium apertis foraminibus, alium non satis purgatae alium quassae sonum reddunt, item fauces tumentes strangulant uocem, optusae obscurant, rasae exasperant, conuulsae fractis sunt organis similes* ("For just as the sound produced in the pipe by the same volume of breath varies according as the stops are closed or open, or the instrument is clogged or cracked, so the voice is strangled if the throat be swollen, and muffled if it is obstructed, while it becomes rasping if the throat is inflamed, and may be compared to an organ with broken pipes in cases where the throat is subject to spasms", tr. H.E. Butler).

112 Pollux, *Onomasticon* 4.67; 4.71–73 (on the *aulos* and the aulete); 4.114 (on the actor); 4.20–23 (on the orator).

113 For further detail see Raffa (2008) and now Dolazza (2016).

114 Aristotle, *Poetics* 1461B.30–32 ... οἱ φαῦλοι αὐλῆται κυλιόμενοι ἂν δίσκον δέη μιμεῖσθαι, καὶ ἔλκοντες τὸν κορυφαῖον ἂν Σκύλλαν αὐλῶσιν. These words are echoed by Horace, *The Art of*

claim that he rejected every and any gesture made by auletes: his criticism is apparently directed only against pointless and unnecessary gesturing. As he has it a few lines later, “all movement is not to be rejected—any more than all dancing—but only the movements of poor performers”.<sup>115</sup> He holds elsewhere that music bears a resemblance to character (ἦθος) much more than the objects of the other senses, including dance figures, and is able to convey this ἦθος *per se*, without assistance from any visual addition.<sup>116</sup> It is no surprise therefore that Aristotle could not approve of an aulete who tried to imitate the throwing of the discus by moving like an athlete.

On the other hand, we have no evidence that Theophrastus shared Aristotle's rejection of these practices; nor is it granted that, even if he did, the innovations brought in by Andron could be put in the same league as the histrionic extravaganzas criticized by Aristotle. If Athenaeus reports Theophrastus' words accurately, which we have no reason to doubt, Andron's movements did not imitate or allude to anything extraneous to the music (for instance the name of the piece or the myth to which it was related). Instead, they were meant to support its rhythmic structure—κινήσεις καὶ ῥυθμούς can be construed as a hendiadys—thus underlining some intrinsic features of the music itself. In this respect, his performance style seems to be significantly close to Theophrastus' ideal of delivery in rhetoric and acting;<sup>117</sup> and although there are no clues as to which work the fragment should be assigned, William Fortenbaugh's suggestion that Andron and Cleolas were mentioned in the book *On Delivery* rather than in some musicological writing seems to make perfect sense.<sup>118</sup> To be sure, the book *On the Musicians* (text 714.2) would make a good candidate too, if, as seems likely, it contained a catalogue of outstanding musicians and the

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*Poetry* 214–215 ... *sic priscae motumque et luxuriam addidit arti | tibicen traxitque uagus per pulpita uestem* “... thus the *tibia*-player added movements and luxuriance to the ancient art and trailed his train, strutting aimlessly on the stage”.

115 Aristotle *Poetics* 1462A.8–9 εἴτα οὐδὲ κίνησις ἅπανα ἀποδοκιμαστέα, εἴπερ μὴδ' ὄρχησις, ἀλλ' ἡ φαύλων.

116 Arist. *Politics* 1340A.28–39 *passim* συμβέβηκε δὲ τῶν αἰσθητῶν ἐν μὲν τοῖς ἄλλοις μὴδὲν ὑπάρχειν ὁμοίωμα τοῖς ἦθεσιν, οἷον ἐν τοῖς ἀπτοῖς καὶ τοῖς γευστοῖς, ἀλλ' ἐν τοῖς ὁρατοῖς ἡρέμα—σχήματα γὰρ ἔστι τοιαῦτα, ἀλλ' ἐπὶ μικρόν, καὶ (οὐ) πάντες τῆς τοιαύτης αἰσθήσεως κοινωνοῦσιν ... ἐν δὲ τοῖς μέλεσιν αὐτοῖς ἔστι μιμήματα τῶν ἡθῶν. “The objects of no other sense, such as taste or touch, have any resemblance to moral qualities; in visible objects there is only a little, for there are figures which are of a moral character, but only to a slight extent, and all do not participate in the feeling about them ... on the other hand, even in mere melodies there is an imitation of character” (tr. J. Barnes).

117 Cf. text 712.

118 Fortenbaugh (1985) p. 283 with n. 49; *Commentary* 8 pp. 149–150.

innovations they had brought to Greek music; however, there are some reasons for suggesting otherwise. Firstly, it should be noticed that in similar cases Athenaeus usually mentions the title of the books he is citing,<sup>119</sup> while in this particular case he does not. Secondly, since chapter 40 of *The Sophists at Dinner* is specifically about dance, Athenaeus is more likely to have consulted sources on dance and dancers than music and musicians. Finally, it seems that Theophrastus was, once again, less interested in musical or organological technicalities than in music as κίνησις and the player's ability to convey it to the audience through his performance.<sup>120</sup>

### Σικελίζειν

The verb σικελίζειν is quite a rare word. Besides Athenaeus and Eustathius, it only occurs as an entry in three late lexica, where it is given a totally different meaning: “to behave badly” or “to be in a bad state”.<sup>121</sup> It seems plausible that the two meanings come from different origins and are completely independent of one another, so that the verb could be used in either sense, depending on the context. However, as far as Athenaeus' text is concerned, the reference to σικελίζειν raises some difficulties. Indeed, it might be doubted whether it should be attributed to Theophrastus or rather to an interpolation by Athenaeus himself, perhaps drawing upon some other source; and there seem to be grounds for defending either thesis. On the one hand, Theophrastus does not appear, in general, very fond of etymologies and the history of words, which are instead Athenaeus' bread and butter; the reference to οἱ παλαιοί is also a very common

119 Cf. Aristoxenus' *On the Auletes*, *On the Auletes and the Instruments*, *On the Boring of the auloi*; Archestratus' *On the Auletes*, in two books; and also Pyrrhander, Phillis of Delos and Euphranor's works, whose titles can be easily inferred from the context: Athenaeus, *The Sophists at Dinner* 14.35–36 634B–E.

120 See text 716; Anderson (1980) p. 92.

121 Hesychius, σ 612 Schmidt σικελίζειν· ἀτηρεύεσθαι. οἱ δὲ πονηρεύεσθαι “to behave badly; or, according to others, to be in a bad state”; Suda, σ 389 Adler σικελίζειν· τὸ αὐστηρεύεσθαι παρὰ Ἐπιχάρμῳ (= fr. 207 Kassel-Austin = 206 Kaibel), οἱ δὲ πονηρεύεσθαι. φασὶν Ἀγησιλάου Ἀρχιδάμῳ γενέσθαι πυθόχρηστον, Σικελίαν φυλάττεσθαι. καὶ τὸν μὲν τὴν νῆσον ἔχειν δι' εὐλαβείας· καὶ ἐς τὸν τρισκελὴ λόφον κατὰ τὴν Ἀττικὴν, ᾧ κεῖται τοῦτο τὸ ὄνομα Σικελία, κατέλυσε τὸν βίον μαχόμενος “the story goes that Archidamus, son of Agesilaus, had been told by the Oracle of Delphi to beware of Sicily; so he would guard against the island. But he ended up losing his life in battle at that three-legged ridge, in Attica, which is called Sicily too”; and Photius, σ 511.5–6 Porson σικελίζειν· τὸ ἀτηρεύεσθαι παρὰ Ἐπιχάρμῳ· οἱ δὲ πονηρεύεσθαι. It should be added that the meaning πονηρεύεσθαι for σικελίζειν might be an attempt to emend a previous and corrupt reading ἐγκιλικίζειν (thus Kaibel; see Kassel-Austin's app. ad loc.).



feature of the *Deipnosophistae*. Moreover, because the movements performed by Andron are likely to be rhythmical gestures rather than dance figures, it is hard to believe that a new word for “dancing” could have originated from a practice that in fact did not amount to proper dancing. Accordingly, one might suggest that the whole clause should be removed from Theophrastus’ text: Θεόφραστος δὲ πρῶτόν φησιν Ἄνδρωνα τὸν Καταναῖον αὐλητὴν κινήσεις καὶ ῥυθμούς ποιῆσαι τῷ σώματι αὐλοῦντα· μεθ’ ὃν Κλεόλαν τὸν Θηβαῖον.

On the other hand, one might wonder why, if *σικελίζειν* was just a synonym for *ὀρχεῖσθαι*, the word does not occur anywhere else with that meaning. In order to account for its being almost a *hapax legomenon*, we could reasonably have expected that it had a much more restricted meaning, as in “to move rhythmically while playing the *aulos*” rather than “to dance”; but if we are to take it in this sense, we must assume that something happened to the text, whether in its manuscript tradition or just because Athenaeus misquoted his source. A very sensible and palaeographically defensible solution, which has been brought to my attention by Andrew Barker *per litteras*, is to read Θεόφραστος δὲ πρῶτόν φησιν Ἄνδρωνα τὸν Καταναῖον αὐλητὴν κινήσεις καὶ ῥυθμούς ποιῆσαι τῷ σώματι αὐλοῦντα· ὅθεν σικελίζειν τὸ (αὐλοῦντας) ὀρχεῖσθαι παρὰ τοῖς παλαιοῖς· κτλ. The dropping of αὐλοῦντας might have been caused by the presence of αὐλοῦντα in the previous line. Of course, if Barker is right, it follows that the clause on σικελίζειν might after all belong to Theophrastus.

Whatever Athenaeus’ source for *σικελίζειν*, we may suppose that when Eustathius came across this passage in his search for material about Odysseus’ praise of the Phaeacian dancers (*Odyssey* 8.382–384), he must have decided to leave out the reference to the two auletes—perhaps because it was not his concern, his discourse focusing exclusively on dancers—and to retain the reference to the verb, which probably met his own erudite interests. But having removed the link between the Sicilian performer and *σικελίζειν*, he had to work out a new explanation for the word; and it seems that he could not do any better than attempting an autoschediastic one, as suggested by such expressions as δηλαδὴ and ὡς εἰκός: “the act of dancing was called *σικελίζειν* by the men of old, of course (δηλαδὴ) because it was a local tradition of the people of Sicily, as stands to reason (ὡς εἰκός).”

### 3 Music and the Soul

719A Plutarch, *Table Talk* 1.5.2, 623A (*BT* vol. 4 p. 26.20–6 Hubert)

#### *Context in Plutarch*

Plutarch's *Table Talk* (*Quaestiones convivales*) consists of a series of discussions (προβλήματα, ten per each of the nine books) which the author represents as having taken place between members of the Greco-Roman social and cultural *élite*—grammarians, rhetoricians, philosophers, as well as physicians and politicians—at various drinking parties in different places, both in Greece and Rome;<sup>122</sup> Plutarch himself features as a character and a first-person narrator. The work is dedicated to the well-off Roman Quintus Sosius Senecio, (Σόσιος in Plutarch's spelling), who also appears as a character in several dialogues, including the one that concerns us here. Book 1 seems to set the tone for the entire work. Question 1 (612E.10–615C.5) tries to establish whether philosophical issues are suitable for a symposium; question 2 (615C.6–619A.10) discusses how tablemates should be seated. This leads to a digression on the position of the most important seats at symposia among the Greeks, the Persians and the Romans (question 3 619B.1–F.5); next comes a debate on the ideal symposiarch (question 4 620A.2–622B.8). After the question containing our Theophrastean quotation (question 5 622C.2–623D.6), three sections follow which address drinking habits (of Alexander the Great, question 6 623D.8–624F.5; Mitridates, Heraclides the boxer and the relatives of Emperor Tiberius, question 7 625A.2–C.5; of the elderly, question 8 625C.7–626E.2). The last two questions deal with minor issues—the different characteristics of salt and fresh water (626E.4–627F.4) and a quarrel between the supporters of two tribes competing at a poetry contest (628A.4–629C.6).

Although coherence is not the author's main concern, questions 1–8 do have something in common insofar as they deal with different ways of drinking and the effect of wine on human character and behaviour. In this framework, question 5—whose topic is “How are we to take the saying that ‘love makes a man a poet’” (πῶς εἴρηται τὸ “ποιητὴν δ’ ἄρα ἔρωις διδάσκει”)<sup>123</sup>—may appear out of place at first reading; however, the connection to the theme of wine is

<sup>122</sup> For a fuller account of the locations of the dialogues see Scarcella (1998) pp. 106–107.

<sup>123</sup> Or perhaps “it is love that inspires a poet” or even “love is a poet's teacher”. This is a quotation from Euripides (fr. 663 Nauck ποιητὴν δ’ ἄρα | ἔρωις διδάσκει, καὶ ἄμουσος ἦ τὸ πρὶν) echoing a well-known proverb quoted also by Plato and Aristophanes (see Scarcella 1998 p. 315 n. 254).

made explicit a few lines below, when the effect of love is compared to that of wine: being in love is like being drunk.<sup>124</sup> Plutarch reports that Aeschylus would compose his tragedies after warming up with wine, and even his own grandfather Lamprias would be at his best at starting questions and disputing after having a few cups, just as incense exhales its pleasant odour only when burning.<sup>125</sup> Both love and wine, accordingly, are held to be so powerful that they can turn a man's character into its opposite—the shy become talkative, the introvert brilliant, and so on; in particular, they can turn an ἄμουσος—a person with no inclination towards art and music—into a poet.<sup>126</sup> When lovers give a speech in praise of their beloved ones, they want it to be pleasant and magnificent—poetic, in other parlance.<sup>127</sup> So much for the first part of the discussion; it is at this stage that Sosius comes up with the mention of a Theophrastean book. As we have suggested above, the work is quite likely to be the *Περὶ μουσικῆς*, even though the syntax is not as unequivocal as it would have been if it had read something like εἴρηκεν ἐν τῷ *Περὶ μουσικῆς*.<sup>128</sup>

### *Where Music Comes from and How It Works*

The content attributed to the philosopher is twofold: first we hear about the three elements from which music originates (pain, pleasure and 'divine inspiration' or 'enthusiasm'), then how these passions affect the voice in order to produce music. The first statement is also known from other sources. In the quote by Aphthonius (text 719B), such passions as pleasure, anger and enthusiasm are induced by music rather than producing it. Another explicit reference to Theophrastus is made in the work *On Months* (*De mensibus*) by the Byzantine writer Iohannes Lydus (VI cent. AD), in a chapter on the third day of the week, which is devoted to Ares, interpreted here as the god of celestial fire.<sup>129</sup>

124 ἐλέχθη δὲ καὶ ὅτι τῷ μεθύειν τὸ ἐρᾶν ὅμοιον ἐστίν, 622D.8. Meriani (2005) p. 288 n. 7 recalls the parallel of Plutarch, *On Love* 762B. Other passages comparable are found in Scarcella (1998) pp. 316, 361.

125 καὶ τὸν Αἰσχύλον φασὶ τὰς τραγωδίας πίνοντα ποιεῖν καὶ διαθερμαίνόμενον. ἦν δὲ Λαμπρίας ὁ ἡμέτερος πάππος ἐν τῷ πίνειν εὐρετικώτατος αὐτὸς αὐτοῦ καὶ λογιώτατος· εἰώθει δὲ λέγειν ὅτι τῷ λιβανωτῷ παραπλησίως ὑπὸ θερμότητος ἀναθυμιάται, 622E.1–5.

126 Love and wine, as well as fire, are described as forces operating from the outside, as effectively pointed out by Meriani (2005) pp. 289–290.

127 ... μάλιστα δὲ λόγον κόλακα προσφέροντες ἡδὺν ἐθέλουσι φαίνεσθαι καὶ γαῦρον καὶ περιττόν, οἷος ὁ ποιητικός ἐστίν, 623A.2–4.

128 See above, pp. 35–36.

129 Iohannes Lydus, *On Months* 2.8.1–3 τὴν δὲ τρίτην ἡμέραν ἀνέθεντο Πυρόντι—"Ἀρης δ' ἂν εἴη οὗτος παρ' Ἑλλήσι—τουτέστι τῷ ἀερίῳ καὶ γονίμῳ πυρὶ "The third day they dedicated to

In order to elucidate the importance of number three in ancient thoughts and beliefs, Lydus lists a series of things that either consist of three parts or are related in some way to this number. Number three itself is the principle (ἀρχή) of odd numbers<sup>130</sup> and is called “special” (ἰδιός) because it cannot be divided in any way; there are three kinds of celestial bodies, those similar to ether, to stars and to stones; there are three parts to the soul, the rational, the irascible and the appetitive one;<sup>131</sup> and likewise with other objects. When it comes to music, Lydus reports that “even of music itself, which moves everything, there are three sections according to Theophrastus, pain, pleasure, and inspiration”.<sup>132</sup> It seems to me unlikely that Lydus had direct access or knowledge of Theophrastus’ doctrine. The word τομαί “sections” referred to λύπη, ἡδονή and ἐνθουσιασμός hardly clarifies whether he took these as parts, kinds or—less likely—different origins of music; moreover, the expression τῆς πάντα κινούσης μουσικῆς shows that Lydus or his source retained a whiff, as it were, of the Theophrastean connection between music and movement, albeit expressing it somehow misleadingly. That these passions induce men to make music is clearly stated by Aristides Quintilianus; although he generically attributes the idea to οἱ παλαιοί<sup>133</sup> without mentioning Theophrastus, the material in chapters 4–5 of Book 2 is very likely to be Theophrastean (see also below).

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the fiery one—this would be Ares, among the Greeks—, i.e. to the aerial and fertile fire” (tr. M. Hooker, with slight adjustments).

130 It should be borne in mind that 1 was not regarded as a number in ancient numerology; the first odd number was therefore 3.

131 Iohannes Lydus, *On Months* 2.8.14–26 *passim* τριχθὰ δὲ πάντα δέδασται (cf. Homer, *Iliad* 15.189), τριῶν ὄντων καὶ αὐτῶν τῶν οὐρανίων σωματίων, τοῦ τε αἰθερώδους, ἀστρώδους τε καὶ λιθώδους. ... τρία δὲ καὶ τῆς ψυχῆς τὰ κυριώτατα, λογικὸν θυμικὸν ἐπιθυμητικόν. “All things have been divided into three, since even the heavenly bodies themselves are three: the aetherial, the starry, and the stony ... And there are also three supreme faculties of the soul: the rational, the spirited, and the appetitive” (tr. M. Hooker).

132 Ibid. 2.8.28–30 καὶ αὐτῆς δὲ τῆς πάντα κινούσης μουσικῆς κατὰ τὸν Θεόφραστον τομαὶ τρεῖς, λύπη ἡδονὴ ἐνθουσιασμός.

133 Aristides Quintilianus, *On Music* 2.4.65–69 pp. 57.31–58.2 Winnington-Ingram καὶ μὴν οὐκ ἀπὸ μιᾶς ἡμᾶς αἰτίας ἑώρων εἰς τὸ μελωδεῖν τρεπομένους ἀλλὰ τοὺς μὲν ἐν εὐθυμίαις ὕφ’ ἡδονῆς, τοὺς δ’ ἐν ἀχθῇ δόσιν ὑπὸ λύπης, τοὺς δὲ ὑπὸ θείας ὀρμῆς καὶ ἐπιπνοίας κατεχομένους ὑπὸ ἐνθουσιασμοῦ, κτλ. “It has also been observed that there is no one single cause that makes us turn to making melody. For those who are happy it is pleasure, for those in sorrow it is grief, and for those possessed by the impulse of a divine breath it is inspiration, etc.” I take the subject of ἑώρων to be the same as above (2.4.45–48 τί δὴ θαυμάζομεν εἰ συνέβη τοὺς παλαιοὺς πλείστην ἐπανόρθωσιν πεποιῆσθαι διὰ μουσικῆς; ἑώρων γὰρ τήν τε τοῦ πράγματος ἰσχὺν καὶ τὴν ἐνέργειαν

One might suggest that the idea of picking three different πάθη which are able to generate music has some relation to the very well known threefold divisions of the soul and its faculties proposed both by Plato and Aristotle. A Platonic model is clearly present in the notion, attributed by Aristides Quintilianus to the ancients, that pleasure is rooted in the appetitive soul, pain and its by-product, anger, in the spirited, and inspiration in the rational.<sup>134</sup> It cannot be excluded that this is a later attempt to adjust Theophrastean ideas to Plato's division of the soul; nevertheless, there are reasons for deeming it genuinely Theophrastean. This argument is used by Aristides as an explanation for the power of music to heal emotional disorders, on the grounds that if one suffers from an excess of a certain passion, he can only be cured through a melody which gives him, in a sort of musical homeotherapy, a controlled dose of the same passion.<sup>135</sup> Now, this account of the mechanism of musicotherapy is consistent in principle with the treatments of epilepsy, sciatica and, perhaps,<sup>136</sup> the trumpet-induced madness described by Theophrastus in his *Περὶ ἐνθουσιασμοῦ* (or *ἐνθουσιασμών*), so that it stands to reason that the philosopher accounted for the effectiveness of the therapy in terms very close to those used by Aristides.

Another possible precedent for Theophrastus' tripartition of passions is Aristotle's discussion of the usefulness of music for pleasure and education in Book 8 of *Politics*. Three emotions are famously named here which affect

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τὴν κατὰ φύσιν “Why then are we surprised to find that it was mostly through music that people in ancient times produced moral correction?—for they saw how powerful a thing it is, and how effective its nature makes it”, tr. A. Barker).

134 Ibid. 2.5.13–16 p. 58.18–21 Winnington-Ingram ταῦτα δ' ἐκ τῶν τῆς ψυχῆς μερῶν ἐθεωρεῖτο· περὶ μὲν γὰρ τὸ ἐπιθυμητικὸν αὐτῇ τὴν ἡδονὴν πλεονάζουσιν, περὶ δὲ τὸ θυμικὸν λύπην καὶ ταύτης ὀργὴν ἔκγονον, περὶ δὲ τὸ λογικὸν τὸν ἐνθουσιασμόν ἑώρων. “These emotions were understood on the basis of their derivation from the different parts of the soul. People (most probably οἱ παλαιοί, cf. previous note) saw that pleasure is rife in its appetitive part, grief and its offspring anger in the spirited part, and inspired ecstasy in the rational (tr. A. Barker).”

135 Ibid. 2.5.18–23 p. 58.23–27 Winnington-Ingram αὐτὸς μὲν γὰρ ἕκαστος ἐκὼν μουσουργεῖ μετρίως τινὶ τῶν εἰρημένων παθῶν ἐνεχόμενος, ὁ δ' ἐς ἄκρατον ἐμπεσὼν ἀκοῇ παιδευέσθαι δύναται ἄν. οὐ γὰρ οἷόν τ' ἄλλως ὠφελεῖσθαι ψυχὴν ἐν ὑπερβολαῖς ἀταξίας ἢ οἷς ἐνεργεῖ συμμέτρως ἐνεχόμενῃ. “A person who is under the moderate influence of any of these emotions makes music of his own accord, while one who has succumbed to untempered emotion may be taught through his hearing. For a soul subject to excesses of disorder cannot be benefited except through the means by which it acts itself when it is affected only moderately (tr. A. Barker).” On musical homeotherapy see also the commentary on texts 726A–C.

136 The case of the Theban who could not stand the sound of the *σάλπιγξ* seems different from the others: see the commentary on texts 726A–B.

everyone, although in different ways and with different force: pity (ἔλεος), fear (φόβος) and divine inspiration (ἐνθουσιασμός).<sup>137</sup> However, apart from the obvious fact that the first two πάθη mentioned in the *Politics* do not match those indicated by Theophrastus, a direct derivation is improbable. On the one hand, Aristotle clearly sees these passions as something present in the soul, which music is meant to purge and purify; nothing in the text suggest that he was thinking of people performing melodies under their influence. On the other hand, the three particular emotions mentioned here do not seem to have been picked with a specific classificatory intention, rather as casual examples (οἷον ἔλεος καὶ φόβος, ἔτι δ' ἐνθουσιασμός). Their being three is probably for the sake of style, and the philosopher could as well have named other passions in their stead; his reason for choosing pity and fear is probably that he had theatrical music in mind.<sup>138</sup>

The second aspect is how passions create or trigger music. Musical expression is thought of as a perturbation—a pathology, in the etymological sense of the word—of the ordinary condition of the voice. Some important questions arise out of this conception. To begin with, it seems that the word φωνή refers unequivocally to the human voice rather than all sounds identifiable as musical notes, however produced. The extended meaning of φωνή, although very commonly found in Greek texts,<sup>139</sup> cannot be applied to this context, because obviously there is no such thing as a “usual course” from which (ἐκ τοῦ συνήθους) the sound of a lyre or *aulos* could be deviated and turned into music. Theophrastus’ argument seems therefore to refer only to vocal music, while instrumental performance fits his discourse only qua imitation or as accompaniment to the former. We should conclude, then, that in his view understanding the nature and/or mechanism of the singing voice is tantamount to comprehending the nature of music *tout court*. In this respect his position appears to be

137 Aristotle, *Politics* 1342A.4–7 ... ὁ γὰρ περὶ ἐνίας συμβαίνει πάθος ψυχᾶς ἰσχυρῶς, τοῦτο ἐν πάσαις ὑπάρχει, τῷ δὲ ἥττον διαφέρει καὶ τῷ μᾶλλον, οἷον ἔλεος καὶ φόβος, ἔτι δ' ἐνθουσιασμός “for any passion that occurs violently in some souls is found in all, though with different degrees of intensity—for example pity and fear, and also divine inspiration”.

138 On Aristotle’s views on music in this passage there is of course an overwhelming amount of bibliography. A useful discussion of the philosopher’s aims is Ford (2004).

139 See, e.g., Plato, *Timaeus* 67B.2–4 ὅλως μὲν οὖν φωνὴν θάμεν τὴν δι’ ὕτων ὑπ’ ἀέρος ἐγκεφάλου τε καὶ αἵματος μέχρι ψυχῆς πληγὴν διαδιδομένην, κτλ. “In general, let us take it that sound an impact made by air, coming through the eras and impinging on the brain and the blood, and passed on as far as the soul, etc.” (transl. A. Barker), where φωνή must mean “sound” in the most general sense.

close to that of Aristoxenus, who famously begins his discussion of harmonics by distinguishing between two kinds of movement of the voice, the intervallic and the continuous one.<sup>140</sup>

Besides, it is worth paying attention to the way in which emotions are thought to affect the voice. The deviation it undergoes is referred to with the verbs παρατρέπω “to turn aside” and παρεγκλίνω “to swerve”.<sup>141</sup> The very fact that Theophrastus poses two different modes or courses of the voice—one for normal speaking, the other for singing—encourages, once again, a comparison between his views and those of Aristoxenus. Theophrastus’ account involves a metaphor of the speaking voice as something that has a straightforwardness of its own, with respect to which musical utterance represents a change of direction and the interruption of an expected continuity. Such a conception bears some resemblance to the imagery introduced by Porphyry in his *Commentary on Ptolemy’s Harmonics* in order to clarify the Aristoxenian definition of a “note” (φθόγγος) as “the incidence (πτῶσις) of the voice on one pitch”.<sup>142</sup> In its normal condition, Porphyry says, the voice is straightforward and continuous like the trunk of a tree, while in singing it falls down into different notes just in the same way as a trunk breaks into pieces from wind or some other violent force.<sup>143</sup> We do not know exactly what source Porphyry drew upon for this

140 Aristoxenus, *Elements of Harmonics* 1.8–10, pp. 13.7–15.5 Da Rios.

141 Although the received text is a little damaged, the emendations suggested by modern scholars are quite reliable and make very good sense; <παθῶν> is an integration by Bernadakis, while παρατρέψ(ποντος) ... <καὶ παρ>εγκλίνοντος are conjectures of Xylander and Bernadakis respectively: see app. ad loc. We are in no position to claim that these are Theophrastus’ *ipsissima verba*, although there is no reason to deny this possibility in principle; however, Plutarch’s wording arguably preserved the meaning of the original. There is no occurrence of the verb παρατρέπω in Theophrastus apart from this one. As for ἐγκλίνω, it is found either in its simple form or with the prefix παρα-: see *On Winds and Weather Signs* 16.8–9 (= fr. 5 Wimmer); *On Dizziness* 5.5 (= fr. 8 Wimmer); *On the Causes of Plants* 2.19.5.3; 6.17.3.8.

142 Aristoxenus, *Elements of Harmonics* 1.15 p. 20.16–17 Da Rios (tr. A. Barker).

143 Porphyry, *Commentary on Ptolemy’s Harmonics* p. 107.4–9 Raffa = p. 86.20–24 Düring ὥσπερ γὰρ καὶ ἐπὶ τῶν ἔξωθεν, οἷον ξύλων ἢ δένδρων, τὰ μὲν ἰθυτενῇ ὀρθᾷ διαμένοντα συνεχῇ πως θεωρεῖται, τὰ δ’ ὑπ’ ἀνέμου ἢ τινος ἄλλης βίας παθόντα κλασθέντα πίπτει· οὕτω καὶ ἡ φωνὴ ἐν συνεχείᾳ μὲν διαμένουσα ὀρθή τις εἶναι καὶ ἀκλαστος νομίζεται, λυγισθεῖσα δὲ καὶ πεσοῦσα μελωδικὴ γίνεται. “For just as with external objects such as beams or trees, those that are straight and remain upright are thought of as somehow continuous, while those affected by the wind or by some other force are broken and fall, so the voice that preserves its continuity is treated as upright and unbroken, but when it is thrown down and falls it becomes melodic” (tr. A. Barker).

passage, but there is little doubt, as convincingly argued by Andrew Barker, that it must belong to an Aristoxenian environment.<sup>144</sup> However, what strikes me as particularly interesting in this simile is the agent that causes the trunk to break: instead of mentioning something ordinary and intentional—the action of a logger, for instance—Porphyry evokes such an unpredictable and devastating force as a gust of wind, thus emphasising both the violence of the agent (ὕπ’ ἀνέμου ἢ τινος ἄλλης βίας ... κλασθέντα) and the passiveness of the trunk itself (παθόντα). If Barker is right and this passage really reflects the parlance of handbooks that were meant to spoon-feed Aristoxenian theories to music students, then this may well be an expansion of Aristoxenus’ statement that “we avoid bringing the voice to a standstill when we are talking, except that some affliction may sometimes force us into this kind of movement”.<sup>145</sup> I would go as far as to suggest that if we knew more of Theophrastus’ musical thought, we would probably discover that he and Aristoxenus were largely in agreement on this matter. Although the word κίνησις does not appear in our text—but cf. κίνημα μελωδητικόν at the opening of text 716—it is straightforward that both Aristoxenus and Theophrastus conceive of the voice, in a sort of mutually complementary way, as a movement; the former providing a more accurate account of how the two kinds of movement differ in practice from each other, the latter focusing on what makes the voice shift from one to another (see above, *Introduction*, pp. 20–21).

#### 719B Aelius Festus Aphthonius, *On Metres* 4.2 (GL vol. 6 p. 159.8–16 Keil)

##### *Context in Aphthonius*

Aphthonius’ grammatical work is preserved as part of Marius Victorinus’ *The Art of Grammar* (*Ars grammatica*: see above, *The Sources*, p. 30). In particular, Book 4 deals with metres that are made up of dactylic and iambic sequences. The author quotes many examples, mostly from Horatian odes, trying to show how they can be derived, in one way or another, from the heroic verse (i.e. the hexameter). At this stage he introduces a sort of digression into the origins

<sup>144</sup> Barker (2011).

<sup>145</sup> Aristoxenus, *Elements of Harmonics* 1.9 p. 14.17–19 Da Rios ... ἐν τῷ διαλέγεσθαι φεύγομεν τὸ ἰστάναι τὴν φωνήν, ἂν μὴ διὰ πάθος ποτὲ εἰς τοιαύτην κίνησιν ἀναγκασθῶμεν ἔλθειν, κτλ. (tr. A. Barker). On the meaning of διὰ πάθος see *Introduction*, p. 15 n. 62. It is perhaps worth noting that πάθος, “affliction” is the same word used by Theophrastus at the end of text 716 (q. v.).



of music and poetry,<sup>146</sup> holding that the ability to utter an articulated voice is intrinsic to human nature. It is our natural disposition (*ingenium*), he says, that teaches us how to pace our voices according to various rhythms and to adjust pitch so as to produce melodies; theoretical speculation on music was built on this natural basis through observation and was then handed down to us by the ancients.<sup>147</sup>

Accordingly, our voices and bodily movements are guided by the movement of our soul.<sup>148</sup> This is also discussed at length after the mention of Theophrastus' theory which constitutes text 719B, along with a brief reference to Plato's doctrine of inspiration<sup>149</sup> and the power of wine to warm up the soul and enhance its ability to produce speeches, poetry and melodies (something

146 The parenthetical nature of this discourse can be inferred from the passage at vol. 6 p. 160.19–20 Keil *sed super hoc hactenus: nunc ad institutum, ut promissimus, ordinem reuertamur* (the *institutus ordo* being the discussion of Horatian metres).

147 Aphthonius, *On Metres* (= Marius Victorinus, *The Art of Grammar* vol. 6 p. 158.30–159.2 Keil) *unde procul dubio intellegi datur adaeque nobis parente eadem tam ad rhythmorum conceptionem quam ad metrorum numeros ac tonos musicae, sed et momenta temporum in enuntiatione uocum, insitum ingenio ac sensibus stadium, non doctrina, sed natura haustum ac traditum, cumque in ipso pariter homine procreator, id postea obseruationis struente magisterio maiores nostros, quod mentis iam pulsu et naturali conceptione collegerant, arti ac disciplinae tradidisse.*

148 Ibid. p. 159.2–7 Keil *denique ad modulanda eadem sensu quodam animique motu instruente nos uelut magistro ducimur gestusque etiam corporis imagini modulationis congruous incitati adfectibus commodamus. etenim ut accentu uocis dispar sonus non disciplina, sed natura editur, ita enim rhythmici et mele uariandis cantu modulationibus prius suapte natura quam artis structione gignuntur.*

149 Ibid. p. 159.26–27 Keil *Plato huius rei testis est, adserens numquam poetam carmen posse memorabile sine instinctu furoris efferre.* Cf. Plato, *Phaedrus* 245A.1–8 τρίτη δὲ ἀπὸ Μουσῶν κατοκωχῇ τε καὶ μανία, λαβοῦσα ἀπαλὴν καὶ ἄβρατον ψυχὴν, ἐγείρουσα καὶ ἐκβαρκεύουσα κατὰ τε ᾠδὰς καὶ κατὰ τὴν ἄλλην ποίησιν, μυρία τῶν παλαιῶν ἔργα κοσμοῦσα τοὺς ἐπιγιγνομένους παιδεύει· ὃς δ' ἂν ἄνευ μανίας Μουσῶν ἐπὶ ποιητικὰς θύρας ἀφίκηται, πεισθεὶς ὡς ἄρα ἐκ τέχνης ἱκανὸς ποιητὴς ἐσόμενος, ἀτελὴς αὐτὸς τε καὶ ἡ ποίησις ὑπὸ τῆς τῶν μαινομένων ἢ τοῦ σωφρονούντος ἡφανίσθη. “Third comes the kind of madness that is possession by the Muses, which takes a tender virgin soul and awakens it to a Bacchic frenzy of songs and poetry that glorifies the achievements of the past and teaches them to future generations. If anyone come to the gates of the Muses and expects to become an adequate poet by acquiring expert knowledge of the subject without the Muses' madness, he will fail, and his self-controlled poetry will be eclipsed by that of men who have been driven out of their minds” (tr. A. Nehamas-P. Woodruff, with minor adjustments).

similar is also incidentally attributed to anger).<sup>150</sup> The main idea is reaffirmed at the end of the digression, where Theophrastus' name significantly occurs again.<sup>151</sup>

### Contents

Apart from the reference to Theophrastus, the material gathered in this passage show other evident and interesting similarities to that used by Plutarch in text 719A. To begin with, the two texts share the idea that love is able to turn even the most anti-musical person into a poet, the Latin *ut ignarum artis ... amor docere, amor poetam facere possit*<sup>152</sup> being nothing but a translation of the Euripidean saying ποιητὴν δ' ἄρα | Ἴρωος διδάσκει, καὶ ἄμουςος ἦ τὸ πρῶν quoted by Plutarch.<sup>153</sup> Another feature they have in common is the reference to wine, which appears somehow abruptly in Aphthonius, immediately after the mention of Plato's μανία (*unde apud ueteres plerique poetarum oratorumque ad excitandum calorem animi uino hausto ... scripturam propositi operis adgredebantur*, vol. 6 p. 159.27–31 Keil); its relation to the context could perhaps have been better understood by the reader had the likeness between wine and love been made explicit as in Plutarch.<sup>154</sup> It stands to reason, therefore, that both authors drew upon the same source, either directly or indirectly, although introducing details of their own choice—for instance Plutarch's mention of Lamprias and Aphthonius' of Cato as examples of people whose rhetorical performances would benefit from the warmth of wine.

There is no answering the question, how much of this material is Theophrastean; however, Aphthonius' insistence that music originates directly from nature, while theory intervenes only at a later stage, may well have retained a good part of Theophrastus' ideas. If this is the case, Aphthonius might be the only source to have preserved this particular aspect of Theophrastus' thought,

150 Ibid. pp. 159.35–160.1 Keil *ira etiam plurimum ponderis in haec studia sensibus nostris dabit*.

151 Ibid. p. 160.15–19 Keil ... *omnem hanc, de qua nobis sermo est, musicam a primordio nascentibus cum anima sensuque infusam ac traditam postea obseruationis struente magisterio expolitam non nihil etiam his adfectionibus, ut Theophrastus adserit, incitari, uigere pulchriusque procedere*.

152 Ibid. p. 160.5–6 Keil. This statement curiously recalls what Pliny the Younger writes of his wife, the young Calpurnia, who was able to set her husband's verses to lyre and sing them without being taught by anyone but love, which is the best teacher: *eadem* (scil. Calpurnia) ... *uersus quidem meos cantat etiam formatque cithara non artifice aliquo docente, sed amore qui magister est optimus* (Letters 4.19.3–5 *passim*).

153 See above, pp. 80–81.

154 Cf. Plutarch's expression quoted above, p. 81 n. 124.

which is the emphasis on the natural origin of the movement that produces music—a conception implicit in the closing sentence of text 716, where the κίνησις of the soul is identified with the φύσις of music (see above). In particular, the last sentence of his argument, in which we hear that mortals benefit from music for the soothing of their souls, the pleasure of their ears or the alleviation of labour,<sup>155</sup> seems to outline three different positions in the debate on the usefulness and purposes of music—the psychological, the hedonistic and the pragmatic, respectively. Within this framework, one might suggest that the Latin *delenimentum animorum* echoes Theophrastus' ἀπόλυσις ... τῶν διὰ τὰ πᾶθῃ κακῶν (see above, text 716).

720 Philodemus, *On Music* 4.81.1–14 Delattre (= 3.35 Kemke, no. 132, *QETHs* p. 30 Sedley)

721A Philodemus, *On Music* 4.82.27–45 Delattre (= 3.37 Kemke, no. 133, *QETHs* pp. 30–31 Sedley)

Since these two texts belong to the same work and context, they can be discussed together. Among the Theophrastean fragments on music, they are the most severely damaged, so that their overall interpretation must allow for large areas of uncertainty. Accordingly, a preliminary discussion of the textual tradition is in order.

### *The Textual Tradition of Philodemus' On Music*

Philodemus famously belongs to a school of thought fiercely contrary to the mainstream conception of the educational, ethical and political usefulness of music<sup>156</sup>—a view that puts him in the same league as the early atomists, Epicurus, the anonymous author of the text recorded in the *PHibeh* 13 and the Skeptics. Our only source for Philodemus' treatise Περὶ μουσικῆς is a group of ten different Herculaneum papyri.<sup>157</sup> Small portions of the text had to be

155 Aphthonius, *On metres* (= Marius Victorinus, *The Art of Grammar* vol. 6 p. 160.13–15 Keil) *itaque siue haec ad delenimentum animorum siue ad oblectamentum aurium seu leuamen laborum sibi mortales procurare stadium habuerint, non anxie sciscitauerint, etc.*

156 See now Asmis (2015) pp. 499–500.

157 Namely *PHerc.* 225, 411, 424, 1094, 1497, 1572, 1575, 1576, 1578, 1583. All of them were used by the first editor, Johannes Kemke (1884), with the only exception of *PHerc.* 1583, which was first published in 1910 by Domenico Bassi. The status of the text until the early 80s is discussed briefly by Longo Auricchio (1983) pp. 562–564; for a full account of the textual

destroyed to make possible the unrolling of the inner parts of the papyrus; however, copies of all the fragments were made in Oxford and Naples. Since the material was so scattered and damaged, the editors' main difficulty was how to place the fragments in a plausible order.

On the one hand, we have good reasons to believe that the entire work was made up of no more than four books;<sup>158</sup> on the other hand, deciding *a*) what the general plan of the treatise was, and *b*) how to assign the extant material to the different books, was largely a matter of guesswork. As early as Kemke's edition (1884), the common opinion was that Book 1 contained an overview of the ideas on music expressed by Plato, Aristotle and the Stoics (mainly Diogenes of Babylon); Book 2 was devoted to the rejection of Plato's views, and Book 3 to the rejection of Aristotle's and Theophrastus' views; finally, Diogenes' doctrine was criticized in Book 4. Kemke's position was not at all unreasonable in principle, for he believed that Philodemus' work was organized more or less in the same way as others we possess in full, such as Sextus Empiricus' *Against the Musicians* (Book 6 of the *Against the Professors*), i.e. as an outline of the adversaries' doctrines followed by their refutation. Whether Philodemus presented the views of other schools objectively or in such a way as to make their refutation easier, was a matter scholars were in no position to judge. This picture was espoused by Dirk A. van Krevelen in his 1939 edition of the whole work and prompted other philologists to attend to partial editions of single 'books'—as was the case with Gioia Maria Rispoli's Book 1 (1969) and Annemarie J. Neubecker's Book 4 (1986). The same can be said of David Sedley, who assigned the two fragments of Theophrastus to Book 3 (*QETHs* pp. 30–31).

Daniel Delattre (2007) has recently brought strong arguments for a radical revision of this mainstream. He has claimed that Kemke's order of the fragments is at odds with both the copies that had been drawn in Oxford and Naples, as well as inconsistent with the ancient ways of dividing the books of a single work into different papyrus rolls. He therefore concluded that all the material we have belongs exclusively to Book 4. It follows that the contents of Books 1–3 cannot be but a matter of speculation; nevertheless, on the grounds of the hints and references found in Book 4, he ventured to offer a hypothetical synopsis, whereby in Book 2 Philodemus tried to distinguish between

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tradition of *On Music* see Delattre (2007) pp. CIX–CCXXXIII, on which this part of my commentary largely relies.

158 Delattre (2007) pp. CLXXXII–CLXXXIII has convincingly ruled out the existence of a fifth book.

different elements of *mousikē*, namely what is purely musical (melodies, rhythms) and what is not (words), whereas in Book 3 he rejected the views of Diogenes of Babylon (Stoic) and his alleged source, Heraclides Ponticus (Peripatetic). As for Book 1, Delattre admits that there is no way of reconstructing its contents.

Texts 720 and 721 belong to a section targeting Diogenes of Babylon's conception of music. Philodemus holds that music cannot bring harmony or virtue into the soul, because there is nothing in it—i.e. in its purely *musical* part—that has anything to do with virtue. In fact, only philosophy can make a man virtuous; and there is nothing philosophical about music.

### *Text and Sense*

Delattre's conclusions appear to be well-grounded and have so far been warmly received;<sup>159</sup> his critical text, which has benefited from multi-spectral analyses of the papyri where necessary, outdates previous editions and in particular Sedley's, on which Andrew Barker relied for his 1992 translation in FHS&G.<sup>160</sup> I have therefore thought it useful, prior to further discussion, to print both text 720 and 721A in Delattre's version. The apparatus reproduces Delattre's, but also contains some proposals of my own.<sup>161</sup>

#### 720

87	..... ]ωντος Θεοφράστου	“(since) Theophrastus (sees
	.... π]ρὸς ἀρετὴν καὶ τοῖς	that) ... to virtue ...
	.....]ιν μόνον, ἴσως δὲ	... only, while at the same time
	..... ἀ]κολασίαν συνερ-	... produce intemperance,

159 See, e.g., the reviews by Solomon (2009) and Janko (2009).

160 See also *Commentary* 9.2 pp. 9–10.

161 As pointed out by William Fortenbaugh in *Commentary* 9.2 p. 10, Delattre's text leaves lacunae in the text and confines all conjectures, even the most reliable ones, to the apparatus. For clarity's sake I explain here the meaning of the signs used by Delattre in his apparatus:

α = uncertain reading;

α' = written above the line;

[[α]] = athetized by the scribe;

{α} = athetized by the modern editor;

α = *paragraphos* on the left margin of the column;

\* = asterisk or other symbol written at the end of the line.

5	γείν ..]ντας φαίνεται βέλ- τιον ....] ἀποτε[θε]ωρημέ- ν.....]α καὶ φυ[σι]κῶς καὶ ..... ἀ]πορίπτ[εσθ]αι τὸ με- .....]ἐ'ι' σ[ώ]ματος εἶναι τι	it seems as if ... would have done better speculating that ... also naturally and ... are expelled, (and that) melody is something ... of the body
10	.....].ς καὶ τὸ τῶν * .....]εν εὐκοσμίαν .....]. δὲ θαμ- β.....]ινεν 14 .....]ων ὅλα	... ... orderliness ... ... ..."

sequitur lacuna fere 15 linearum

- 81.1 | .....]ωντος Delattre : | μέλη, ἐ]ῶντος potius quam | .. εἰπ]όντος coniecerit Delattre  
ἀν εἰπ]όντος Janko συνορ]ῶντος Sedley μὴ λέγ]οντος Rispoli
- 2 π]ρός post Gomperz Rispoli : [ἄγειν π]ρός dubit. Delattre ὅτι οὐ π]ρός Delattre Cron.  
Ercol. 19 (1989)
- 2-3 τοῖς | [ἄιδουσ]ιν coniecit Delattre : τοῖς | [παισ]ιν brevius Kemke [πρὸς] | [παί-  
δουσ]ιν Gomperz τοῖς (ex imag. multispectr.) [ἄνδρασ]ιν (sic) vel [μαθοῦσ]ιν (scil.  
μουσικήν) dubit. Delattre
- 3 post μόνον punctum altum papyrus
- 3-4 δὲ | [πρός post Rispoli Sedley : δὲ | [τὸ εἰς coniecit Delattre ex imag. multispectr.
- 4 ἀ]κολασίαν Rispoli e papyro : ] κολακίαν dubit. Kemke τινα] κολακίαν coniecerim
- 4-5 συνερ|[γεῖν δό]ντας coniecit Delattre : συνερ|[γεῖν πά]ντας Rispoli συνερ|[γούς  
δ]ντας Sedley συνερ|[γ-] Kemke συνερ|[γεῖν ἄιδο]ντας coniecerim
- 5-6 βέλ|[τιον Rispoli : βέλ[τιον ἄν Sedley βέλ[τιον δν τὰ] dubit. Delattre
- 6 τοὺς] vel ἡμᾶς] dubit. Delattre
- 6-7 -ρημέ|[νους vel -[να dubit. Delattre : -ρημέ|[νος Sedley
- 7 τιν]α vel ταῦτ]α coniecit Delattre : ἔνι]α Sedley ἴδι]α Rispoli || φυ[σι]κῶς (φ[υσι]κῶς  
Kemke) an φᾶ[τι]κῶς e papyro dubit. Delattre || καὶ | [..... e papyro Delattre  
κα|[κιῶν Sedley κα|[κίας Rispoli
- 8 ἀ]πορίπτ[εσθ]αι post Sedley proposuit Delattre ex ἀποριπτο[υ]μένους Phld. Vit. 8,  
col. 8.8 Jensen ἀ]πορίπτ[ει. κ]αί Kemke
- 8-9 μέ|[λος φύσ]ἐ'ι' coll. col. 41.18 e papyro coniecit Delattre : μέ|[λος τοῦ] Kemke  
μέ|[λος δέ] Sedley || σ[ώ]μα- Delattre e descript. Neapol. ῥσ'ώμα- Sedley σώμα-  
Kemke
- 10 | [± 10].ς Delattre ex imag. multispectr. : [χεινητικόν] Sedley [κινήτικόν] Rispoli καὶ  
ψυχῇ]ς dubit. Delattre || fin. \* e papyro Delattre [[χ]] post Rispoli Sedley
- 11 | [παθῶν χαρί]εν post Rispoli Sedley 12-13 ]. δὲ θαμ|[β- Delattre : ]α δὲ θαμ[... post  
Rispoli Sedley
- 14 primum edidit Delattre

It seems that ll. 1–5 contain an opposition between the moral improvement that music can induce—which is limited to few people or cases—and its negative consequences, such as disorderliness. According to Sedley’s version, Philodemus is attributing to Theophrastus the idea that rhythms have little influence on human behaviour, and one which is limited to children and can result either in virtue (ἀρετήν, l. 2) or intemperance (ἀκολασίαν, l. 4).<sup>162</sup> Theophrastus should have therefore admitted, Philodemus goes on (ll. 5–14), that some evils are expelled naturally, while melody is something capable of moving the body. For this argument to work, we need to understand ἐνια καὶ φυσικῶς κακιῶν ἀπορίπτεσθαι as if these were evils of the soul only, whereas the kinetic power of music affects only the body. On the other hand, with Rispoli’s conjectures, the interpretation changes slightly: “Theophrastus did not say that rhythms contribute to virtue, and only for children, but all the rhythms contribute to intemperance; so that he would have done better theorising that some particular rhythms are naturally able to expel evil, and melody can move the body in some way, and the gracefulness of passions produces orderliness”.

Neither interpretation is particularly implausible or inconsistent *per se*; it should be borne in mind, however, that almost none of the key words on which the first part of the argument relies is a safe reading. To begin with, the assumption that here Philodemus is concerned with rhythms is conjectural itself, since the text bears no trace of the words ῥυθμός, ῥυθμοί or the like. As Delattre points out,<sup>163</sup> the only grammatical reason to postulate that the subject is ῥυθμοί might be the plural masculine πάντας in l. 5—which, unfortunately, is a conjecture too. Moreover, the article τὰ (?) at the end of the preceding column (80.45) suggests that the subject of the new clause could be neuter, such as μέλη (see also Rispoli’s conjecture at 80.45 [καλὰ οὔτε τὰ μοχθηρὰ μέλη]). If this were the case, our passage would have nothing to do with rhythms at all.

That children are mentioned is not certain either. Kemke’s conjecture παῖσιν in l. 3 is possible in principle, if one considers that music was thought to be particularly effective in the education of youngsters as a temporary surrogate for more philosophical forms of learning, which involved bare words without melodic or rhythmic embellishments.<sup>164</sup> A sort of musical toy, an idio-  
phone called πλαταγή, had reportedly been invented by Archytas of Tarentum

162 See Aristides Quintilianus, *On Music* 1.19 pp. 39–40 Winnington-Ingram; 2.15 pp. 82–84 Winnington-Ingram.

163 Delattre (2007) p. 397 n. 2.

164 See, e.g., Aristides Quintilianus, *On Music* 2.3 pp. 54–55 Winnington-Ingram.

for keeping children busy and preventing them from breaking things in the house.<sup>165</sup> However, this reading encounters two difficulties. Firstly, the adverb *μόνον* (which is perfectly readable): it is quite hard to believe that there was a theory—whether we decide that Theophrastus was endorsing or rejecting it—which proposed that rhythms or melodies could affect the young *only*. Secondly, the word *παίσιν* appears to be shorter than the lacuna.

These problems could be overcome by considering Delattre's suggestions *τοῖς μαθοῦσιν* or—even better, in my view—*τοῖς ἀίδουσιν*, both of which might imply a distinction between those who produce music actively, when singing or in the course of learning how to sing, and—*ex silentio*—those who listen passively. This may be an explicit statement by Theophrastus or an inference drawn by Philodemus in order to back his own polemic against the *êthos*-theory; however, since Theophrastus defines music as the movement through which the soul gets rid of its evils (text 716), such distinction appears compatible with his thought, and so does the idea that performers could benefit more than others from singing or playing music. On the other hand, the adverb *μόνον* poses a difficulty once again, for it is unlikely that according to Theophrastus the benefits of music were for performers *only*: that would be at odds with his belief in musicotherapy (see texts 726A–B–C). However, it seems to me that with the reading *τοῖς ἀίδουσιν* another interpretation of *μόνον* becomes possible: the expression might allude to those who sing *the melody alone*, i.e. without words—a topic occasionally touched upon in Peripatetic writings. We hear from the compiler of the pseudo-Aristotelian *Problems* that uttering notes *ἄνευ λόγου* was perceived as inferior to proper singing, because without words the voice lacked articulation and in this particular respect was outdone by musical instruments.<sup>166</sup> Moreover, Theophrastus himself lists the habit of humming melodies when listening to someone singing or playing among the features of

165 See, e.g. Aristotle, *Politics* 1340B.25–31; discussion in Huffman (2005) pp. 302–307.

166 This, at least, seems to be the sense of [Aristotle], *Problems* 19.10 918A.29–33 *passim* διὰ τί, εἰ ἥδιον ἢ ἀνθρώπου φωνή, ἢ ἄνευ λόγου ἄδοντος οὐχ ἥδιον ἐστίν, οἷον τερετιζόντων, ἀλλ' αὐλός ἢ λύρα; ... ἢ μὲν γὰρ φωνή ἥδιον ἢ τοῦ ἀνθρώπου, χρουστικά δὲ μᾶλλον τὰ ὄργανα τοῦ στόματος, κτλ. "Why, if the human voice is more pleasant (*scil.* than an instrument), is the voice of one singing without words, like one babbling, not more pleasant, but an *aulos* or lyre is? ... for although the human voice is more pleasant, the instruments strike a note better than the mouth, etc." (tr. R. Mayhew). The adjective *χρουστικός*, which is connected to the verb *χρούω* and the noun *χροῦσις*, seems to indicate the ability to mark the attacks of the different notes, perhaps by means of the articulation of consonants—which is precisely what humming falls short of.



δυσχέρεια, “nastiness”. That, one infers, was considered inappropriate since it annoyed the audience.<sup>167</sup>

How such an interpretation could fit into our vexed context is certainly hard to say, nor would it be of any use to venture into ungrounded assumptions. Nevertheless, the idea that Theophrastus somehow conceived of the production of melody<sup>168</sup> as something purely musical, i.e. without words, appears consistent with text 716.7–9, where we hear that the soul “bends” or “turns” the voice (the verb is *τρέπειν*) to the extent that it is able to do so with something *ἄλογος*.<sup>169</sup> If the argument is really about *μέλη*, “songs”, Philodemus might have implied that virtue, if any, is induced not by melody, rather by the words that are being sung—a conception consistent with the distinction he apparently draws elsewhere between musical and non-musical elements in vocal performances.<sup>170</sup>

167 Theophrastus, *Characters* 19.10 καὶ αὐλούμενος δὲ κροτῆσαι ταῖς χερσὶ μόνος τῶν ἄλλων καὶ συντερεῖζεν καὶ ἐπιτιμᾶν τῇ αὐλητρίδι, τί οὕτω ταχὺ ἐπαύσατο “when listening to the *aulos* he is the only one beating time, humming, and chiding the girl for stopping so soon”. Some editors think that this phrase has been misplaced in the manuscript tradition and prefer to print it at 11.10, i.e. in the chapter on *βδελυρία*, “buffoonery”. However, this is scarcely relevant to our discussion.

168 On the notions of “composition”, “production” and “performance” with reference to ancient Greek music see above, *Introduction*.

169 See above, pp. 60–61.

170 Philodemus, *On Music* 4.128; 148.5–22 Delattre; see also Delattre (2007) p. CLXXX. The issue was probably dealt with fully in Book 2 (see above). On the distinction between words and music in Epicurus’ thought see, e.g., Rispoli (1991) pp. 72–74. Distinguishing between melody as such and the words that are sung is a useful argumentative tool for anti-*ēthos* writers, as shown, e.g., by the case of Sextus Empiricus, *Against the Professors* 6.10, who recalls the well-known Homeric scene where Achilles sings epic verses to Patroclus (*Iliad* 9.186–189). The same verses had been also quoted by [Plutarch], *On Music* 40 1145D–F in order to show the usefulness of the noble and dignified music of old. Sextus reverses the point of view and claims that “since he (Achilles) was amorous and intemperate, it is not contrary to expectations for him to be eager about music” (*Against the Professors* 6.25 ἐπὶ τοῦ μηνιοντος Ἀχιλλέως· καίτοι ἐρωτικοῦ ὄντος καὶ ἀκρατοῦς οὐ παράδοξον τὴν μουσικὴν σπουδάζεσθαι, tr. D. Davidson Greaves); but, as I have noticed elsewhere, in quoting the *Iliad* Sextus omits, significantly, the latter hemistich of 9.189 (τῇ δ’ ὅ γε θυμὸν ἔτερπεν, [ἄειδε δ’ ἄρα κλέα ἀνδρῶν]), thus surreptitiously dismissing the possibility that the contents of the song had a positive moral effect on the hero’s character. For further detail see Raffa (2011).

## 721A

82.27	...] ἐναντ[ι .....	...
	..]ισομαι περ[.....	...
	..]ν καὶ προ[.....	...
30	...]ιαν· οὐ γὰρ λέγω μηδ[ἐν ταύ]της ἀνήκειν εἰς σπο[υ- δ]ήν, [ἀλ]λὰ πᾶ[.]ν εἰς ἀνησ <sup>ι</sup> /ν καὶ τέρψιν, εἰ καὶ μὴ τίθη- μι τὸ μιμητικὴν εἶναι· ἥ	... “For I do not say that none of it is relevant to serious pursuit, but ... to relaxation and enjoyment, although I do not claim it to be imitative either.
35	καὶ τὸ δοκοῦν ἐμαυτῶι συναναιρήσω *. τὸ γὰρ αὖ μα- χεῖσθαι με τᾷ ληθεῖ τοῦτο φάσκοντα, πολλοῦ δεῖ πα- ριστάνειν Θεόφραστος, ὅπ[ό- ταν ἄλλογον εἶναι γράφῃ τ[ὸ μὴ κ[.]ε]ἰν εἶναι ὅλως καὶ ῥυθμι- ζειν τὰς ψυχὰς τὴν μουσ[ι] - κὴν, ἐ[πει]δὴ περ, ὥς τοῦτο φασ[.....]εληλ[.]γμεν[.. 45 .....]νω[.	Otherwise I shall be refuting my own belief, too. Moreover, that in saying so I am at odds with the truth, Theophrastus is far from proving, when he writes that it is unreasonable that music does not at all move and harmonize souls, since, as he said this, ... ...”

27 ἐναντ[ι Delattre : ἐναντ[ Rispoli

30 οὐ γὰρ(ται descr. Neap.) post Kemke Sedley : οὐτε Angeli || μηδ[ἐν Rispoli ([μ]ηδ[ἐν]  
Kemke) || ταύ]της Angeli : |αὐ]τῆς Kemke

31–32 σπο[υδ]ήν post Gomperz Rispoli : [[σ]] πό|[νον] dubit. Kemke

32 [ἀλ]λὰ πᾶ[.]ν post Kemke Delattre : ἀλλ’ ἅπᾶ[.]ν (sic) Angeli

33 | καὶ e papyro Rispoli : |κ|αὶ Kemke

34 ante ἥ| interp. Sedley : {ι} Rispoli om. Kemke

35 -τῶι con. Delattre : τῶ [μὴ] Kemke τῶ [οὐ excludere nequit Delattre

39 ὅπ[ό]- Angeli : ὅ]- Kemke

40 γράφῃ Sedley : γράφῃ Kemke γράφῃ(ι) | Rispoli γράφῃτ[αι] Angeli || τ[ὸ] Rispoli ([τὸ]  
Kemke)

41 κ[.]ε]ἰν Rispoli (κείνῃν Kemke)

42 μουσ[ι]- Rispoli : μουσι-| Kemke

43 τοῦτο| e papyro con. Delattre : τοῦτ’ ἔ- Kemke

44 |φάσ[κεται vel -[σιν dubit. Delattre : -|φάσ[κεν Kemke Rispoli || δι]εληλ[ε]γμέν[ος  
Angeli: ]ληλ[ Sedley

45 ]νω[ e papyro Delattre : ]νο[ Rispoli

Apart from the first three and the last two lines, from which no sense at all can be extracted, the bulk of the text is in better condition than the previous one. Philodemus seems to concede that there is something in music worth paying attention to,<sup>171</sup> but holds that its only purposes are relaxation (ἄνεσις) and pleasure (τέρψις);<sup>172</sup> on the other hand, he refrains from claiming that music is mimetic. Then Theophrastus' idea is introduced—the usage of the verb γράφω (l. 40) suggests that the quotation is accurate if not at firsthand—that it is unreasonable (or “absurd”: ἄλογον) that music cannot move souls (κινεῖν) and give them an orderly shape (or “educate”: ῥυθμίζειν). Regrettably, it is impossible to read the following sentence, which almost certainly contained a further elucidation of the doctrine ascribed to Theophrastus and Philodemus' reasons for rejecting or dismissing it (“because, since he—*scil.* Theophrastus—says indeed that this ...”, ll. 43–44); however, some cautious inferences can be drawn with a clear conscience. Philodemus is aware that accepting the mimetic nature of music would amount to destroying his own theory (ll. 34–36); now, since the conception of mimesis is famously pivotal to Aristotle's theory of musical *êthos*,<sup>173</sup> it stands to reason that he perceived his own doctrine as antithetical to Aristotle's too. On the other hand, his way of expressing disagreement with Theophrastus' case for music being able to move souls appears to be somehow less radical, since evidently he does not consider that theory as capable of crippling his own or proving it inconsistent (ll. 36–39). One might speculate, accordingly, that Philodemus construed Theophrastus' musical psychagogics as independent of the notion of mimesis, or at least not entirely indebted to it. Our philosopher does not seem, in general, very committed to the mainstream *êthos*-theory; it could be plausibly suggested then that he did accept it in principle, although in a different—perhaps weaker—way, in which the possibility that music educates the soul is neither denied nor emphasized,

171 Epicurean orthodoxy famously denied philosophical dignity to the study of music and accordingly regarded any effort to acquire performative skills or comprehend the art's technicalities as unworthy of a sage. However, if the readings ταύτης (*scil.* μουσικῆς) and σπουδῇν in ll. 31–32 are right, Philodemus' position might have perhaps been less intransigent, though it is not clear what exactly he meant by σπουδῇ here. The expression ἀνήκειν εἰς σπουδῇν somehow reminds us of Plato's criticism of the so-called *harmonikoi* in *Republic* 531C ... τοὺς γὰρ ... ἀριθμοὺς ζητοῦσιν, ἀλλ' οὐκ εἰς προβλήματα ἀνίσταν, κτλ. “... for they they seek the numbers, but do not ascend to generalized problems”.

172 See also Rispoli (1991) p. 89.

173 The reference passage is Aristotle, *Politics* 1340A.38–42. Music is said to affect the listeners' souls and behaviour *because* it possesses some features that imitate characters, μιμήματα τῶν ἡθῶν. See Halliwell (2002) pp. 240–241.

rather understated by means of a litotes: ἄλογον ... τὸ μὴ κινεῖν ὅλως καὶ ῥυθμίζειν τὰς ψυχὰς τὴν μουσικὴν.<sup>174</sup>

**721B Censorinus, *About the Day of Birth* 12.1 (p. 21.23–28 Hultsch)**

*Context in Censorinus*

Censorinus' mention of Theophrastus occurs in the numerological discussion which stretches up to chapter 14 of his work (see above, *Sources*, p. 27). That there must be a link between music and the day of birth is affirmed at both the beginning and the end of chapter 12,<sup>175</sup> but the arguments lined up in the rest of the chapter do not seem designed to prove this specific assumption. They insist instead on the divine nature of music,<sup>176</sup> which is used on many occasions to honour and appease the gods, as happens in the rites for Mars, Apollo, Minerva etc. (12.2); on men being able to understand such nature, *pace* Epicurus, so that music helps rowers resist fatigue<sup>177</sup> and soldiers overcome the fear of death (12.3); and finally, on its power to purify the soul and heal

174 Such 'weaker' approach recalls in some way the attitude to *êthos*-theory taken by Aristoxenus at the beginning of *Elements of Harmonics*, Book 2 (2.31–32 pp. 40.11–41.12 Da Rios).

175 Censorinus, *About the Day of Birth* 12.1. *Nec uero incredibile est ad nostros natales musicam pertinere ...* 12.5. *Itaque si et in corporis et in animi motu est harmonia, procul dubio a natalibus nostris musica non est aliena* "Nor is it incredible that there should be a relation between music and our birthdays ... Thus, if there is harmony both in the movements of the body and the soul, no doubt that music is not extraneous to our birthdays".

176 Which was a commonplace, famously stated, *inter alia*, in Plato, *Symposium* 215C–D (Alcibiades' speech).

177 Censorinus, *About the Day of Birth* 12.3 *Denique quo facilius sufferant laborem, uel in nauis sueta a rectore symphonia adhibetur* "therefore, for the crew to cope with fatigue more easily, even on a ship the helmsman has the usual tune played". *Sueta* (to be connected to *symphonia*) is a convincing conjecture by Rapisarda (1980) against the received *in nauis metu*. The reference is to the melody performed by an *aulos*-player placed among the rowers (the so-called τριηράυλης; see, e.g., Pollux, *Onomasticon* 4.71) in order to synchronize their movements (further references to the usage of such tunes, *celeusmata*, in Roman world are to be found in Rapisarda 1980 pp. 99–101). That music helps hard-working men to endure fatigue is a commonplace: see, e.g., [Aristotle], *Problems* 19.1 917B.19–20, where we hear that the sound of the *aulos* has a relieving effect both on hard-working and resting people, because it reduces the fatigue of the former and amplifies the pleasure of the latter (Διὰ τί οἱ πονοῦντες καὶ οἱ ἀπολαύοντες αὐλοῦνται; ἢ ἵνα οἱ μὲν ἥττον λυπῶνται, οἱ δὲ μᾶλλον χαίρωσιν; "Why do those who are suffering and those who are enjoying themselves both have the *aulos* played to them?"; tr. R. Mayhew).

mental disorders, as can be inferred from habits and conceptions attributed to Pythagoras,<sup>178</sup> Asclepiades,<sup>179</sup> and Herophilus<sup>180</sup> (12.4).

### Contents

Although preceded by some remarks on the calculation of the horoscope and the length of pregnancy, and followed by an explanation of the similarities between musical intervals and planetary distances in Pythagoras' thought, this chapter does not deal at all with numerology; it is rather concerned with different conceptions of music and its relation to movement.

Censorinus lists Socrates', Aristoxenus' and Theophrastus' ideas on the nature of music in a sort of crescendo from the least to the most inclusive conception. Plato refuses the involvement of physical elements in any 'harmonic' representation of the soul;<sup>181</sup> accordingly, the idea attributed to Socrates—

178 On the Pythagoreans bringing order into their souls by singing particular melodies before going to sleep and after waking up, see, e.g., Iamblichus, *Life of Pythagoras* 114; other Latin sources are recalled by Rapisarda (1991) p. 173. The sources are not unanimous about the instruments to which such tunes were sung; however, it seems likely that the *aulos* was at least as popular as the lyre among the sect.

179 1 cent. BC physician from Bithynia (his chronology is fully discussed in Polito 1999). His work is completely lost; however, indirect sources tell us that his doctrines were based on a sort of atomism which put him in the same league as Democritus and Epicurus, and for this reason he was criticized by Galen (Asmis 1993 pp. 146–150; on the nature of the particles he postulates, the so-called *ἄναρμοι ὄγκοι*, see now Polito 2007). It is all the more interesting, therefore, that Asclepiades granted music healing powers, albeit apparently for the cure of mental illnesses only, because such beliefs usually imply some sort of *êthos*-theory, which atomists are generally inclined to reject.

180 Renowned 111 cent. BC physician from Chalcedon, who is said to have written on pulses (cf., e.g., Galen, *On the Doctrines of Hippocrates and Plato* 6.10–11; *On Trembling* vol. 5 p. 585 Kühn; etc.). Herophilus' study of the different types of pulses must have been heavily indebted to rhythmic theory and vocabulary—perhaps too much so, if we are to judge by Galen's tirade against his followers in the work *On Distinguishing Pulses* vol. 8 p. 871.13–17 Kühn διὰ τοῦτο γοῦν καὶ περὶ τῶν ῥυθμῶν ὅσα μὲν ἐχρῆν αὐτοὺς ἔτι παῖδας ὄντας ἐν τοῖς τῆς μουσικῆς διδασκαλείοις ἐκμαθεῖν, ταῦτ' οὐδόλως εἰς τὰ τῆς ἱατρικῆς συγγράμματα φέρουσι, τὸ τῶν ὀψιμαθῶν πάθημα πάσχοντες, οὐδὲ σιωπῆσαι δυνάμενοι, καὶν ἐτέρας ἢ τέχνης “this is why, even with reference to rhythms, they (sc. the Herophilians) bring into their books on medicine what they should have learned as boys at music lessons, just as happens with the late in learning, who cannot help talking, even when another subject is being discussed”.

181 See, e.g., Plato, *Phaedo* 94B–95A. Admitting physical constituents into the harmonic structure of the soul would have been at odds with the conception of the immortality of the soul itself: see Pelosi's commentary (2010) pp. 181–183. Voice and bodily movement are

whose name occurs only here in the whole work<sup>182</sup>—that music consists in voice alone could be an attempt to condense his musical thought in a short formula.

As far as Aristoxenus is concerned, the idea ascribed to him that music consists both in voice and bodily movement is found nowhere in his extant work. It somehow recalls one of the definitions of music reported by Aristides Quintilianus, but there is no certain way of linking Aristides' vague indication of his source to Aristoxenus or his school.<sup>183</sup> However, melody is famously described by Aristoxenus as a particular kind of movement of the voice, κίνησις τῆς φωνῆς (see, e.g., above, pp. 20–21); he also mentions the κίνησις σωματική in the *Elements of Rhythmics* as one of the three objects that can be affected by rhythm (ῥυθμιζόμενα), the others being speech (λέξις) and melody (μέλος).<sup>184</sup>

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famously associated in Plato, *Laws* 664E–665A; however, that discussion concerns less the definition of music than the usefulness of singing in choirs for the education of citizens.

182 See Rapisarda (1991) p. 170.

183 Aristides Quintilianus, *On Music* 1.4 pp. 4–6 Winnington-Ingram famously lists four different definitions of music respectively as: 1) the science of melody and of everything concerning it (ἐπιστήμη μέλους καὶ τῶν περὶ μέλος συμβαινόντων); 2) the theoretical and practical expertise in melody both complete—i.e. including melody, rhythm and diction, see Barker (1989) p. 402, n. 13—and instrumental (τέχνη θεωρητική καὶ πρακτική τελείου μέλους καὶ ὀργανικοῦ); 3) the skill of what is appropriate in sounds and movements (τέχνη πρέποντος ἐν φωναῖς καὶ κινήσεσιν); and finally as 4) the science of what is appropriate in sounds and bodily movements (γνώσις τοῦ πρέποντος ἐν φωναῖς τε καὶ add. Winnington-Ingram) σωματικαῖς κινήσεσιν). The last definition is a more precise formulation of the third and is added by Aristides himself (ἡμεῖς δὲ τελεώτερον ἀκολουθῶνς τῇ προθέσει· κτλ.), while the third is attributed to “others” (ἄλλοι δὲ οὕτως) without any further specification.

184 See, e.g., Aristoxenus, *Elements of Rhythmics* 2.9 p. 6.16–21 Pearson ἔστι δὲ τὰ ῥυθμιζόμενα τρία· λέξις, μέλος, κίνησις σωματική· ὥστε διαιρήσει τὸν χρόνον ἢ μὲν λέξις τοῖς αὐτῆς μέρεσιν, οἷον γράμμασι καὶ συλλαβαῖς καὶ ῥήμασι καὶ πᾶσι τοῖς τοιοῦτοις· τὸ δὲ μέλος τοῖς ἑαυτοῦ φθόγγοις τε καὶ διαστήμασι καὶ συστήμασιν· ἢ δὲ κίνησις σημείοις τε καὶ σχήμασι καὶ εἴ τι τοιοῦτόν ἐστι κινήσεως μέρος “there are three kinds of *rhythmizomena*, speech, melody, bodily movement. Consequently speech will divide the time by its own parts, namely letters, syllables, and words, and so on. Melody will divide it by its own parts, notes, silent intervals, and groups of notes; bodily movement will divide it by signals and positions and whatever other parts of movement there may be (tr. L. Pearson)”. A few lines below, Aristoxenus compares voice to bodily movement in order to elucidate the concept of primary time-length (ibid. 2.11 p. 6.31ff. Pearson): λέγω δὲ τῶν οὕτω κινουμένων, ὡς ἢ τε φωνὴ κινεῖται λέγουσά τε καὶ μελωδοῦσα καὶ τὸ σῶμα σημαίνον τε καὶ ὀρχούμενον καὶ τὰς λοιπὰς τῶν τοιούτων κινήσεων κινούμενον “I am speaking of movements of the voice in speaking or singing and of the body in its gestures and dance movements and similar such movements (tr. L. Pearson)”.

It stands to reason, therefore, that Censorinus' source or sources—whether or not the same as Aristides', is a matter of pure speculation—may have combined these two notions, perhaps on the grounds that dance is part of *mousikē* taken in its broader meaning.

Theophrastus' notion of music comes next clearly because it is the most inclusive. That he deemed the movement of the soul essential to music is already known in more detail from other sources; what makes Censorinus' testimony really interesting, on the other hand, is that the constituents of music are said also to include bodily movement. Unfortunately, we are in no position to ascertain what his sources said about the relationship between these three constituents. We do know, again from other sources (text 716), that in Theophrastus' view the movement of the soul triggers that of the voice, thus creating melody; we also know that he was interested in bodily movement as a part of musical performances (text 718). What we do not know is whether he attached the same importance to these two kinds of movement or considered the latter, in some way, as a secondary one. The expression κίνημα μελωδητικόν in text 716 suggests that the philosopher might have allowed for the existence of other kinds of movements caused by the soul—perhaps a κίνημα ρυθμικόν or even σωματικόν. However, there are grounds for suggesting otherwise. Philodemus, as damaged as his text may be, criticizes him precisely for not having gone as far as to conceive of melody as something capable of moving the body.<sup>185</sup> This statement may be confirmed by the Arabic testimony according to which music belongs exclusively to the soul;<sup>186</sup> but as we will see in due course, the Arabic portrayal of Theophrastus' doctrines on music appears quite suspect. All in all, the question raised by our text seems doomed to remain unsolved.

722–725 *Depository of Wisdom Literature*, Chapter on Theophrastus,  
sayings nos. 11–14

The Arabic compilation called *Šiwān al-ḥikma* includes four sayings on music attributed to Theophrastus, whose authenticity is far from certain. Let us now discuss text 722 (= saying no. 11). Dimitri Gutas<sup>187</sup> listed eight different versions of this saying, the earliest of which occurs in the writing of a certain Paul

185 See text 720.4.

186 See text 723.

187 Gutas (1985) pp. 97–100.

entitled *The Element of Music*. The saying appears there as the answer of an anonymous character to a question (“Why does the soul become pleurably affected upon the movement of the strings of instruments?”) posed by another character whose name could be read as Theophrastus, although the Arabic text can also be interpreted as “the first” (Gr. πρῶτος). In general, what can be extracted from all the versions is that music (or singing) has (or is) a ‘virtue’ or ‘noble quality’ that makes it too high or difficult for ordinary speech to express it; hence melody. The second part of the saying contains an exhortation to listen to what the soul tells us through music and to leave the external world aside.

Although its attribution to our philosopher is extremely dubious, this saying is worth discussing, for it appears compatible with Theophrastus’ thought on music as attested elsewhere. I will hereinafter focus on the version which was included in FHS&G (1992), leaving out the last sentence on music arousing heartaches and harbouring temptations of all sorts, which is clearly a later interpolation.<sup>188</sup> According to Gutas’s translation, the meaning is that melody is produced when the soul is incapable of expressing an unspecified ‘virtue’ through words because it fails to grasp its essence.<sup>189</sup> Most of the obscurity of the passage derives obviously from the fact that we do not know which Greek word was translated with the Arabic word for ‘virtue’. This ‘virtue’ is presumably to be construed as a ‘quality’ or ‘characteristic’ of the voice that corresponds to a stage in which the soul is not, or is not yet, capable of seeing clearly what is happening to it—in other words, which *pathos* is affecting it. Not only is this statement tolerably compatible with both the notion of a ‘melopoietic movement’ on the part of the soul (κίνημα μελωδητικόν) which is expressed in text 716,<sup>190</sup> and the idea that it is emotions (πάθη) that make the voice incline from ordinary speech towards melody;<sup>191</sup> it might also shed some more light on how Theophrastus conceived of the production of melody. The

188 Gutas (1985) p. 89 n. (c).

189 FHS&G (1992) pp. 577–579 “Singing is a virtue of speech that is obscure to the soul and incapable of having its innermost essence clearly stated; so it (the soul) expresses it (this virtue) in melodies, by means of which it arouses heartaches, and it harbors all sorts of temptations”. The rendition of the same passage by Altheim-Stiehl (1961) p. 15 is slightly different: “Singing is a high form of language, which is difficult to understand for the soul and escapes definition of its essence. It (the soul) causes it (the high form of language) to become perceptible in the form of sounds, and arouses thereby sadness. It (the singing) causes every sort of distinction to become mute within its (the soul’s) compass”.

190 Altheim and Stiehl (1961) p. 15 had noticed, although without expanding, that there are “points of contacts” between this saying and the theory of the κίνημα μελωδητικόν in text 716.

191 See texts 719A–B. This view is also consistent with the role attributed to *pathos* by



element referred to as ‘virtue’ in Arabic, whatever the original Greek, depends on some kind of *pathos*. The source interestingly seems to place the generation of melody at a stage that precedes the act of thinking, for the soul cannot express this emotion. Now, if we take this as meaning that the soul is incapable of putting such a *pathos* into words, it follows that the text refers to the act of singing in its purely musical sense, i.e. without words—which is consistent too with the process hinted at in text 716.<sup>192</sup>

One might object that in text 716.7–8 Theophrastus clearly states that the κίνημα μελωδητικόν is “very accurate” (σφόδρα ἀκριβές) in turning the expressive intentions of the soul into melody, whereas in the text at hand singing is said to come as a result the soul’s inability to understand its own emotions; but this apparent contradiction can be overcome, I believe, if we distinguish between the spheres of the soul and the body. It is true that the study of musical intervals and melodies was largely dominated by mathematical and ‘scientific’ approaches (see *Introduction*); however, ancient music theorists were well aware that producing notes and intervals required great precision on the part of the body, because each note was obtained from a specific position of the larynx, the tongue and the other constituents of the vocal apparatus. From Aristides Quintilianus and the so-called Bellermann’s Anonymous we know of a sort of solmisation system in which notes were indicated by different syllables opening with the same consonant (τ) followed by different vowels.<sup>193</sup> Ptolemy, in a famous passage of his *Harmonics*, compares the human windpipe to a ‘natural *aulos*’; then, in order to illustrate our ability to emit the right notes, he speaks of a ‘starting point of the movement’ (τὸ πλῆττον, lit. “the striker”) which shifts up and down the windpipe and is able to grasp the right positions from which to deliver the different notes. This is possible, Ptolemy says, thanks to “our ruling principles” and their “inborn music” (τῶν ἐν ἡμῖν ἡγεμονικῶν τῇ συμφύτῳ μουσικῇ κτλ.).<sup>194</sup> No learning, no training, no theoretical reflection are involved: this ability is natural and, one may add, requires a bodily activity. Now, if we go back to our saying, we may consider that the fact that *the soul* is incapable

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Aristoxenus in turning speech into singing (if this is the way in which Aristoxenus’ thought should be construed, see above, p. 15 n. 62).

192 Se Commentary on the meaning of the adjective ἄλσος at 716.9 (above, p. 60); on melodies without words see also Commentary on text 720 (above, pp. 94–95).

193 Aristides Quintilianus, *On Music* 2.13–14 pp. 77–82 Winnington-Ingram; Bellermann’s Anonymous, *On Music* 9–10. For the possibility that this solmisation is used in an early-v-cent. BC *epinetron* showing an Amazon playing the *salpinx* (Eleusis Museum, inv. no. 907), see Bélis (1984) and, *contra*, Pöhlmann-West (2001) p. 8.

194 Ptolemy, *Harmonics* 1.3 p. 9.6–15 Düring (tr. A. Barker).

of stating and, consequently, naming the emotion that operates on it, does not mean that the movement of the soul cannot enable *the body* to produce the notes and the intervals necessary for translating one particular emotion into the corresponding melody, and eventually discharge it. I would therefore suggest that text 722 might after all contain some Theophrastean material—how genuine is impossible to tell—and I can see no reason in principle for jettisoning it as spurious.

The views expressed in text 723 (= saying no. 12), on the other hand, could hardly have been espoused by Theophrastus in the way in which they are put into words in the *Šiwān al-ḥikma*, for at least two reasons. Firstly, the sharp distinction between music, which is a pleasure proper exclusively to the soul, and such other pleasures as food and drink, which belong to the body only, is inconsistent with both the holistic conception of music we find in text 721B and the belief that music can cure bodily pains, for instance sciatica (texts 726A–B–C). Secondly, it is hard to see why the philosopher should have deemed music negative and dangerous to the soul.

Saying no. 13 (text 724) has the form of an *argumentum ad absurdum* and could be somehow consistent with the criticism of the *êthos*-theory attributed to Theophrastus by Philodemus.<sup>195</sup> The contents of sayings 12–13 seem to depend in some way on the same source as Plutarch's *Table Talk* 7.5 704E–705B;<sup>196</sup> however, there is no mention of Theophrastus in that section of the work.

The last saying, no. 14 (text 725), is quite hard to make sense of; at first sight, nothing comparable seems to be found anywhere else in Theophrastus. The key word of the saying, the Arabic *lahn* (plur. *luḥūn*), means not only “melody” or “rhythm” but also “speech” or “dialect”; the only reason—perhaps plausible, yet inconclusive—for preferring the former meaning over the latter is that this saying occurs along with others referring to music.<sup>197</sup> On the other hand, one might as well decide that the saying refers to the soul paying sharper attention to the more obscure speeches, or manners of speaking; in which case, no ground would be left for including it among the sources on music. It would have more in common, instead, with saying no. 15 (text 306), which apparently involves the role of words in the process of knowledge and perhaps the issue of oral instruction.<sup>198</sup>

195 See text 720, with the necessary caveats suggested by the textual uncertainties.

196 As already noticed by Gutas (1985) p. 89.

197 Thus Gutas (1985) p. 90.

198 See Gutas (1985) pp. 90–91.

However, it is worth investigating to what extent the text lends itself to being interpreted in a musical sense. The main difficulty this interpretation encounters is the notion that some melodies are more “concealed” than others, for it is self-evident that what is less clear requires sharper attention, but what this means in the case of melodies needs clarification. One might suppose, for instance, that the concealed melodies are those new to the listener. People listen with more pleasure to the songs they already know, we hear from the compiler of the pseudo-Aristotelian *Problems*, because they can pinpoint more easily their σκοπός, i.e. “target” or “destination”,<sup>199</sup> the implication being that any melody has its own σκοπός. As often happens with the *Problems*, the text does not elaborate on what exactly is meant by ‘target’. One might construe it in a more technical sense, i.e. the note or notes towards which a particular melody or a part of it are headed—in other words, its ‘direction’; alternatively, the word σκοπός might be given a more philosophical connotation, as if it were a synonym for τέλος, i.e. the ‘aim’ of the melody—its ethical meaning or purpose. Whatever interpretation one prefers, our Theophrastean saying somehow completes the sense of the pseudo-Aristotelian problem, for it stands to reason that listening to new melodies is less “pleasant” (ἡδύ) because it calls for a stronger effort. This sort of enquiry can be seen, therefore, as reciprocal to that testified by text 716 and perhaps 722, because these texts deal with the activity of the performer’s soul and the production of melody, while text 725 deals with the activity of the listener’s soul and the reception of melody.

#### 4 Music and the Human Body

While the relation between music and the soul has bearings on ethics and character, the one between music and the body is connected, not surprisingly, to ‘medicine’—the term is to be intended here in its broader sense, i.e. a set of practices that are meant to cure illnesses or, less often, prevent them. The belief that music possesses magical powers, including the power to heal,

199 [Aristotle], *Problems* 19.5 918A.3–9 Διὰ τί ἡδίων ἀκούουσιν ᾄδόντων ὅσα ἂν προεπιστάμενοι τυγχάνωσι τῶν μελῶν, ἢ ὧν μὴ ἐπίστανται; πότερον ὅτι μᾶλλον δῆλος ὁ τυγχάνων ὥσπερ σκοποῦ, ὅταν γνωρίζωσι τὸ ᾄδόμενον, κτλ. “Why do people listen with more pleasure to people singing melodies they happen to know beforehand, than to ones that they do not know? Is it because (*scil.* the singer) hitting his target, as it were, is more obvious when they recognize what is being sung, etc.” (tr. R. Mayhew). The same question occurs, in a slightly different wording, in problem no. 40. The text is damaged in several points, but the general sense is clear.

is primeval and is found in virtually every ancient culture. The Greeks are no exception: an early example is famously found in the *Odyssey*, when the eponymous hero is wounded by a wild boar and his hunt-mates, the sons of Autolycus, stop the bleeding by singing him an *ἐπαιδὴ*.<sup>200</sup> It is unclear whether or not this ‘enchantment’ included words; if it did, one might wonder if its magical power was associated to the words as such, to their being rhythmically organized or to the melody on which they were uttered.<sup>201</sup> However, if we are to trust Iamblichus, the *epōidai* used by Pythagoras could also be *melismata*, i.e. melodies sung without words;<sup>202</sup> music could serve both as a prophylactic<sup>203</sup> and as a cure for bodily and mental disorders.<sup>204</sup> Although frowned upon by intellectuals, professional physicians and medical writers with the advent of sophistry and the rise of professionalism in various fields of human activity,<sup>205</sup> the belief in musicotherapy survived well beyond the 5th cent. BC, until late antiquity. The school of Aristotle showed a keen interest in it, on one hand as a development of the notion of *katharsis*,<sup>206</sup> on the other hand for the treatment

200 *Odyssey* 19.455–458. Interestingly, the syntax of the Greek attributes the antihemorrhagic action to the spell, in spite of the fact that the sons of Autolycus did actually bond Odysseus’ wound: ... Αὐτολύκου παῖδες φίλοι ... | ὠτειλὴν δ’ Ὀδυσῆος ἀμύμονος ἀντιθέοιο | δῆσαν ἐπισταμένως, ἐπαιδὴ δ’ αἶμα κελαινὸν | ἔσχεθον, κτλ. “The sons of Autolycus ... bound Ulysses’ wound skilfully, and stopped the bleeding by means of a spell etc.” It is a matter of debate, therefore, whether the *ἐπαιδὴ* should be construed as magic in proper sense or as mere psychological support. The issue is thoroughly discussed in Provenza (2016) pp. 81–86.

201 On the assumption that the power lay in the words, it has been suggested that they should not be considered as musicotherapy *stricto sensu* (West 2000 p. 54). On *epōidai* see also Pelosi (2004) and now the important remarks of Provenza (2014) pp. 300–301.

202 Iamblichus, *Life of Pythagoras* 114.

203 This is the case with musical practices that are meant to keep the soul orderly and balanced, for which Figari (2000) p. 7 uses the expression ‘médecine préventive’. For the practice of singing, especially in the spring but also in other seasons, see, e.g., Iamblichus, *Life of Pythagoras* 110–111. According to Iamblichus, Pythagoras preferred the lyre over the *aulos*, for the sound of the latter seemed to him violent and by no means worthy of a free man (τοὺς γὰρ αὐλοὺς ὑπελάμβανεν ὑβριστικὸν τε καὶ πανηγυρικὸν καὶ οὐδαμῶς ἐλευθέριον τὸν ἦχον ἔχειν, 111.8–9); we have already seen, however, that this testimony is to be taken cautiously (see *Introduction*, pp. 18–19).

204 See, e.g., Iamblichus, *Life of Pythagoras* 64.

205 See in general Provenza (2016) pp. 89–95; Edelstein (1937) pp. 235–237. Wallace (2015) p. 46 cites opportunely Sophocles, *Ajax* 581–582 as an example of the rejection of ancient shamanic conceptions.

206 Anderson (1980) p. 87. See also Commentary on text 719A, pp. 83–85.

of pain and fatigue induced by hard work<sup>207</sup>—a context in which, as we will see in the discussion of the following texts, the *aulos* plays a fundamental role.

726A Apollonius, *Amazing Stories* 49.1–3 (*Paradoxographi Graeci* pp. 140.262–142.275 Giannini)

726B Athenaeus, *The Sophists at Dinner* 14.18 624A–B

726C Aulus Gellius, *Attic Nights* 4.13.1–2

Notwithstanding the slight difference in the book title between texts 726A and 726B,<sup>208</sup> this group of testimonies is likely to refer to the same treatise of Theophrastus, i.e. the one *On Inspiration*. They are all consistent in the idea that the philosopher credited the sound of the *aulos* with being able to heal sciatica. The same content is also found in Eustathius' *Commentary* on the *Iliad*,<sup>209</sup> where he quotes Athenaeus almost literally in the course of a digression on the soothing effects of music on the soul, and in the v-century Roman physician Caelius Aurelianus, who discusses the treatments of sciatica and psoitis in Book 5 of his treatise *On Chronic Diseases*.<sup>210</sup> Eustathius'

207 Illnesses are not, in fact, the only sources of distress. Fatigue, backpain and muscular pain can be caused by continuous hard work, as was the case with rowers, soldiers, as well as farmers and certain categories of artisans. Inquiring how music could improve the lives of these types of people is consistent with Aristotle's interest in the application of music other than in simple education and moral edification (see, e.g., the famous analysis of the different scopes of music in *Politics* Book 8; see also Ford 2004). We find traces of such inquiry, for instance, in [Aristotle], *Problems* 19.1 917B.19–20, see above, p. 98 n. 177.

208 On which see also Matelli (2004) pp. 161–162.

209 Eustathius, *Commentary on Homer's Iliad* 16.617 vol. 3 p. 907.4–6 van der Valk. Eustathius' mss. explicitly indicate Athenaeus as the source of the digression (see van der Valk's apparatus).

210 Caelius Aurelianus, *On Chronic Diseases* 5.1.23 pp. 918–920 Drabkin *item alii cantelenas adhibendas probauerunt, ut etiam Philistionis frater idem memorat libro XII De adiutoriis, scribens quendam fistulatorem loca dolentia decantasse, quae cum saltum sumerent palpitando discusso dolore mitescerent. alii denique hoc adiutorii genus Pithagoram memorant inuenisse* "Other physicians prescribe music, as the brother of Philistion tells us in Book 12 of his work *On Remedies* (= M. Wellmann, *Fragmentsammlung der Griechischen Ärzte*, Berlin: Weidmann 1901 vol. 1 p. 116 text 18). He writes that a certain piper would play his instrument over the affected parts and that these would begin to throb and palpitate, banishing the pain and bringing relief. And some hold that it was Pythagoras who

discussion of the amazing powers of music is introduced to comment on the epithet ὀρχηστής, “dancer”, directed by Aeneas to the Greek Merion, who had been so agile as to dodge his spear thrust. Immediately after the mention of some warlike dances, such as the πυρρίχη and the σίκιννις, which were meant to prepare the body for this kind of agility, there is a digression entirely indebted to Athenaeus. First comes the reference to Clinias the Pythagorean, who would play the lyre to calm down,<sup>211</sup> then the famous example of Achilles playing the lyre to calm his wrath;<sup>212</sup> third comes our quotation from Theophrastus. In comparison to the third testimony, text 726B adds that, for the illness to disappear, the *aulētēs* needed to play in the Phrygian *harmonia* over the area in pain (κατὰ ... τοῦ τόπου).<sup>213</sup> In text 726A—one of the two entries related to music in Apollonius’ collection of stories (see above, pp. 23–24)—the notion also includes other disturbances, such as fainting (λιποθυμίαν), panic attacks (φόβους), and chronic mental disorders (τὰς ἐπὶ μακρὸν γινομένης τῆς διανοίας ἐκστάσεις). Among these is epilepsy, which not only induces muscular spasms in the whole body, as was well known to ancient physicians (whereas sciatica provokes localized pain),<sup>214</sup> but also takes the form of a behavioural disturbance and appeared therefore similar to frenzy or madness.<sup>215</sup> It is well known that in pre-Hippocratic times epilepsy, along with a few other diseases such as leprosy and Saint Vitus dance, was regarded as supernatural and somehow ‘sacred’, and that one of the most important advances of Hippocratic medicine was indeed the dismissal of such a primitive-looking belief.<sup>216</sup> Finally, Boethius

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discovered this kind of treatment” (tr. I.E. Drabkin). The Philistion whose brother is remembered here might be the famous physician from Locri, friend of Plato, who boasted Dionysius of Syracuse among his patients (thus Wallace 2015 p. 46; but there are reasons to be cautious, see Diller 1938 col. 2408). Although Caelius does not mention Theophrastus, the material he draws from his source is likely to be Theophrastean: the expression *loca dolentia decantasse* is strikingly close to καταλύῃσι ... τοῦ τόπου in text 726B. On Caelius as a doxographer see van der Eijk (1999) pp. 431–433.

211 From Athenaeus we know that the source is Chamaeleon, fr. 4 Wehrli.

212 Homer, *Iliad* 9.186–189.

213 The verb καταλύω can be construed metaphorically, in the sense of ‘putting a spell’ on someone (thus West 2000 p. 60); however, in this case I do not see any reasons why the player could not lean over a particular part of the patient’s body.

214 For the definition of epilepsy see, e.g., Galen, *On Affected Parts*, vol. 8 p. 173.5 Kühn.

215 Sciatica is often treated along with other rheumatic affections, such as gout and arthritis (see, e.g., Galen, *The Composition of Medicines According to the Regions of the Body* vol. 9 p. 331 Kühn); on the ancient awareness of the rheumatic nature of this disease see Byl (1988).

216 Providing a full bibliographical account on this matter is beyond the purpose of this

recalls that the great *aulos* virtuoso Ismenias of Thebes had also cured sciatica with his instrument; but no mention of Ismenias occurs in Theophrastus's extant texts.<sup>217</sup>

It is perhaps in the latter context that Theophrastus' interest in musicotherapy is to be placed, for the idea that an exciting harmony like Phrygian<sup>218</sup> was effective against sciatica implies that it had the power to annihilate the disease by bringing it to paroxysm. This therapeutic strategy, which is explicitly described in the Caelius Aurelianus passage,<sup>219</sup> is evidently connected with the conception of music as a movement through which the soul gets rid of its evil passions (text 716)<sup>220</sup> and with the broader notion of musical *êthos*.<sup>221</sup>

The same can hardly be said, as we will see in due course, of the usage of auletic sound in the case described in text 726A. To confirm the antiepileptic

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volume. Suffice it to mention the classic work of Lloyd (1979) pp. 15–29, and the most complete discussion of the perception of epilepsy from antiquity to modern times, Temkin (1945). I have also come across a reference to another volume on epilepsy in classical sources (Baumann 1923), but was not able to see it.

217 Boethius, *On the Principles of Music* 1.1 p. 185.20–22 Friedlein *Ismenias uero Thebanus, Boeotiorum pluribus, quos ischiadici doloris tormenta uexabant, modis fertur cunctas abstersisse molestias* “moreover, by means of modes, Ismenias the Theban is said to have driven away all the distresses of many Boeotians suffering the torments of sciatica” (tr. C. Palisca). On Ismenias see also Commentary on text 715, namely p. 39 n. 7. According to a convincing conjecture of E.K. Borthwick (1988) to Philodemus, *On music* 4.41.28 vol. 1 p. 67 Delattre, Ismenias might have given his name to a melody (κέλευσμα Ἰσμηνίου) that could galvanize hard-workers and that was used well after his death.

218 On the character of Phrygian harmony see, e.g., Aristotle, *Politics* 1342B.

219 See above, p. 107 n. 210. Provenza (2016) p. 181 n. 21 offers a slightly different interpretation of Caelius' words *quae* (scil. *loca*) *cum saltum sumerent palpitando*, which does not seem to imply paroxysm, since suffering limbs are said to start vibrating in accordance with the music and to be therefore led to relaxation (“poiché le parti dolenti avevano incominciato a palpitare seguendo il ritmo musicale, e da questo erano state condotte al rilassamento”).

220 See also Matelli (2004) pp. 170–171.

221 I do not share Anderson's idea (1980) p. 94 that “there is ... little or no evidence that he (Theophrastus) personally believed in the healing of the body through music, though he may well have recorded traditional beliefs”. It is true that Gellius (text 726C) does not explicitly attribute that belief to our philosopher, for he just says to have found mention in a book of Theophrastus of what was “believed by many, and has been put on record” (*creditum ... a plerisque ... et memoriae mandatum*; tr. A. Barker); however, it seems to me that the wordings of text 726A.4–5 (ἰᾶται γάρ, φησίν, ἡ καταύλησις καὶ ἰσχιᾶδα καὶ ἐπιληψίαν) and text 726B (ὅτι δὲ καὶ νόσους ἰᾶται μουσικὴ Θεόφραστος ἰσθόρησεν ..., ἰσχυακοὺς φάσκων ἀνόσους διατελεῖν ...) make it clear enough that the philosopher, even if he was referring to a common belief, did hold it trustworthy.

power of the *aulos*, Apollonius tells the story of a man driven into a frenzy by the sound of the *σάλπιγξ* and cured by Aristoxenus. Although the representation of the philosopher as an actual music therapist sounds highly implausible, his interest in the therapeutic usages of music is consistent with another anecdote included in Apollonius' collection and which comes from the Aristoxenian *Life of Telestes* (the v-century dithyrambographer). The people of Locri and Rhegium reportedly consulted the oracles over the case of their women suddenly jumping up and storming out of the city, as though summoned by an unknown force, and the response was to have paeans performed for sixty days in the spring, which accounted for the remarkable flourishing of paeanographers in that part of *Magna Graecia*.<sup>222</sup> An oracle is also mentioned in our Theophrastean fragment, but the textual damage occurring in ll. 6–7 makes it hard to understand what its role was. With Theodore Reinach's adjustments (see app. ad loc.), the sense is that Aristoxenus consulted the oracle and then started the treatment; however, given the ambiguity of the pronoun αὐτόν in l. 6, it cannot be excluded that the oracle urged the patient to ask for Aristoxenus' help. Both scenarios are theoretically possible, for inquiries of this kind were not necessarily made by the interested persons, and questions on behalf of others are also attested.<sup>223</sup>

The symptoms displayed by the Theban patient are similar to those of the Calabrian women and, at the same time, compatible with epilepsy: he shouted in such a way as to disgrace himself (ἐβόησεν ... ὥστε ἀσχημονεῖν) and acted as though he was maddened—or fighting, if we maintain the mss.' reading μαχόμενον, which I personally prefer, over Giacomo Leopardi's conjecture μαινόμενον. The brain disorder that causes epilepsy can in fact induce an altered state of consciousness, and the patient may well have hallucinated about being in a battle. Although it is not explicitly said whether this condition was temporary or permanent, one can infer from the last sentence (l. 12 ἐποίησεν καὶ τῆς σάλπιγγος φωνὴν ὑπομένειν, “*scil.* Aristoxenus made him able to endure even the

222 no. 40 = Aristoxenus, fr. 117 Wehrli Ἀριστόξενος ὁ μουσικὸς ἐν τῷ Τελέστου βίῳ φησίν, ᾧ περ ἐν Ἰταλίᾳ συνεκύρησεν, ὑπὸ τὸν αὐτὸν καιρὸν γίνεσθαι πάθη, ὧν ἐν εἶναι καὶ τὸ περὶ τὰς γυναῖκας γενόμενον ἄτοπον. ἐκστάσεις γὰρ γίνεσθαι τοιαύτας, ὥστε ἐνίοτε καθημένους καὶ δειπνοῦσας ὡς καλοῦντός τινας ὑπακοῦειν, εἶτα ἐκπηδᾶν ἀκατασχέτους γιγνομένας καὶ τρέχειν ἐκτὸς τῆς πόλεως. μαντευομένοις δὲ τοῖς Λοκροῖς καὶ Ῥηγίνοις περὶ τῆς ἀπαλλαγῆς τοῦ πάθους εἰπεῖν τὸν θεὸν παιᾶνας ἄδειν ἑαρινούς [δωδεκάτης] ἡμέρας ξ', ὅθεν πολλοὺς γενέσθαι παιανογράφους ἐν τῇ Ἰταλίᾳ. West (2000) p. 55 sees this usage of the paeon as a sort of 'indirect' musicotherapy, because the songs were not meant to cure the women, but to appease the god who had driven them mad. See also Provenza (2016) pp. 129–130.

223 See, e.g., Eidinow (2007) pp. 104–107, esp. p. 104 on the oracle epigraphs from Dodona.



sound of the trumpet”) that the symptoms appeared every time the patient was exposed to the pathogenic sound and disappeared shortly after.

The attacks are said to have been triggered by the sound of the trumpet as such, i.e. by its *timbre* (in this sense, I believe, is the word φωνή to be taken), rather than by any piece of music that may have been played on it.<sup>224</sup> This seems to rule out immediately any reference to the notion of musical *êthos*, which implies performing melodies with particular intervallic and stylistic features—as is the case with text 726B, where it is the Phrygian mode or *harmonia*, along with the sound of the *aulos*, that is responsible for the healing of the sciatica. On the other hand, since the symptoms worsened if someone trumpeted πολεμικόν, one might object that the music that was being played did have some bearings on the patient. That, of course, is possible; however, one might wonder whether we are to construe these sounds as a ‘melody’ in the proper sense of the word. *Qua* military instrument, and also because of its organological characteristics, the σάλπιγξ was not expected to produce musical phrases so articulate as to allow any specific ‘character’ to unfold;<sup>225</sup> such a task, even in warfare, was left to the *aulos*.<sup>226</sup> Quite interestingly, the verb most

224 Unlike West (2000) p. 60, I do not think that Aristoxenus cured his patient “by accustoming him to listen to the *aulos*, which he gradually played *louder* until the man could tolerate the trumpet” (emphasis mine). By the way West presents this statement, the reader could be led to thinking that this is what the texts *says*, but nothing in the Greek justifies this interpretation.

225 Given the particular nature of the instrument, it would have been very hard to play more than a few notes from the harmonic series; moreover, playing required great physical strength. For this reason, the *salpinx* is usually conceived of as a man’s instrument. Claudius Aelianus (*Various History* 1.26), in reporting the apparently extraordinary case of a woman trumpeter called Aglaïs, represents her as a giantess who would eat about five kilograms of meat, four portions of bread and drink three and a half litres of wine.

226 It is well known, for instance, that the *auloi* could be used to help marching armies keep their pace and formation (see, e.g., Thucydides, *History of the Peloponnesian War* 5.70; see also above, p. 98 n. 177, on the τριηράρχης, who gave pace to rowers). Matelli (2004) pp. 160–161 argued that this was due to the ability of the *aulos* to keep the soldiers’ mood balanced and immune from excessive excitement, while trumpets and horns had the opposite effect. I would rather explain this difference, more pragmatically, with the different mechanism of these instruments. Giving pace implies playing continuously for a long time, which was hardly possible with a σάλπιγξ for the reasons already mentioned (see previous note); on the contrary, not only could an aulete play as long as he wanted, but thanks to the circular breathing technique it may also have been possible for him to never interrupt the flow of the rhythm. I would also suggest that the presence of auletes on triremes and among marching soldiers had the additional advantage of relieving the men’s pain and fatigue (see above, p. 107 n. 207).

commonly associated with the sound of the *salpinx* is σημαίνειν, “to signify”,<sup>227</sup> rather than ἄδειν, μελωδεῖν or other verbs indicating melodic expression,<sup>228</sup> for this sound was meant to be loud enough to be heard in the turmoil of a battle, and to give signals that were short and easily recognisable, which are often referred to as τὸ πολεμικόν.<sup>229</sup>

On the other hand, unlike the Calabrian women’s, the Theban’s disturbance was music-induced, which makes Aristoxenus’ therapy a sort of homeopathic one.<sup>230</sup> For it to work, it must be assumed that the sound of the *aulos* was perceived as partially similar to that of the *salpinx*, so as to enable the patient to grow antibodies to it, as it were; this is also suggested by the expression κατὰ μικρόν, “little by little”, which indicates gradual improvement in the patient’s condition. One should therefore ask to what extent an *aulos* could have sounded like a trumpet. No doubt that the two instruments were quite different from one another in terms of mechanism, timbre, contexts of performances, expressive purposes and expectations of the audience; nevertheless, the *aulos* was the most versatile and mimetic of ancient musical instruments.<sup>231</sup> If an αὐληγὴς was able to imitate the hissings of a dying dragon, it is reasonable that he could also evoke the sound of a trumpet.<sup>232</sup> In a famous description of a musical show performed in the theatre of Corinth, Apuleius presents a *tibicen* who played “a Dorian battle tune and, combining deep drones with shrill screeches, **in the manner of a trumpet**, excited the energy and agility of the

227 See, e.g., Diodorus Siculus, *Library of History* 9.22.2; 13.45.8; 15.55.3 etc. An interesting usage of δηλοῦν, “to show”, is found in Aeneas the Tactician, *On the Defence of Fortified Positions* 22.22.4. It is because of this difference between the two instruments that Anderson (1980) p. 87 denies that the therapy described here has anything in common with other ‘cathartic’ usages of the *aulos*.

228 An exception is Claudius Aelianus, *Various History* 2.44, where the trumpet call for ‘attack’ is referred to as τὸ παρορμητικόν ... μέλος.

229 In our text the article is missing (ll. 9–10 εἰ δέ ποτε καὶ πολεμικὸν σαπλίσσειε τις), so that one might either construe πολεμικόν as an adverb (“if anyone played in a warlike way”) or imply a noun like μέλος (as in Andrew Barker’s rendition “if anyone ever played a military tune”; cf. also [Callisthenes], *History of Alexander the Great* 1.41.19–20) without the sense being affected relevantly.

230 Provenza (2016) p. 138 defines this therapy as ‘allopathic’, on the grounds that a different instrument, i.e. the *aulos*, is used to cure the effects of the *salpinx*.

231 See the commentary to text 718.

232 We hear from Pollux, *Onomasticon* 4.84.7 that in the iambic part of the *Pythikos nomos*—on which see above, p. 84 n. 97—the player was expected to include the σαπλιστικά κρούματα (‘trumpet calls?’), which, whatever exactly they were, must have evoked the sound of a *salpinx*.

dance".<sup>233</sup> Unfortunately, we are in no position to ascertain exactly what features in this performance could have evoked the sound of a trumpet; I suspect that the effect described by Apuleius had less to do with the combination of grave and acute notes than the violence and perhaps the absence of *vibrato* and *portamento* with which the acute ones might have been emitted.<sup>234</sup> What is relevant to my point, however, is that it was possible to play the *aulos* in such a way as to produce an effect similar to that of a σάλπιγξ; and I dare suggest that this is what Aristoxenus devised to cure the Theban.

233 Apuleius, *The Golden Ass* 10.31.24–27 ... *tibicen Dorium canebat bellicosum et permiscens bombis grauibis tinnitus acutos in modum tubae saltationis agilis uigorem suscitabat*. It is worth noticing the close resemblance of the Latin *canebat bellicosum* to the Greek σαλπίζειν πολεμικόν in our passage. I have discussed this passage at length in Raffa 2012.

234 The expression *permiscens bombis grauibis tinnitus acutos* does not seem to me useful to describe specifically the performance he had in mind here because elsewhere he uses an almost identical wording with reference to auletic performance in general; see *Florida* 3.13–16 *primus Hyagnis in canendo manus discedinauit, primus duas tibias uno spiritu animauit, primus laeuis et dexteris foraminibus, acuto tinnitu et graui bombo, concentum musicum miscuit*. The expressive tools used by *aulos*-players, which I have indicated here, perhaps anachronistically, by means of modern words, were comprehended in the notion of πλάσμα. At the time of the so-called 'New Music revolution' (v–iv cent. BC) they had been enhanced thanks to the introduction of more flexible reeds in the instrument's mouthpiece, as described in a widely known Theophrastean passage (*Enquiry into Plants* 4.11). It stands to reason that if the *aulos* was to imitate the trumpet, the more idiomatic features of the its own expressive code had to be reduced.



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# Index of Greek, Latin, and Arabic Words

## Greek

- ᾄδειν] to sing 112  
 ἄλογος] without words or ratio 60, 96–98, 103n192  
 ἀκολασία] intemperance 93  
 ἀκουσματικοί, οἱ] a group of Pythagoreans 4n12  
 ἀκουστός] audible 62  
 ἀλλοίωσις] change 47–48  
 ἄμουσος] someone with no sense for music 80n123, 81, 88  
 ἀναγράφειν] to transcribe accurately 49  
 ἄνεσις] relaxation 97  
 ἀντίληψις] apprehension 59n71  
 ἀπόλυσις] release 89  
 ἀρετή] virtue 91, 93  
 ἀριθμός] number 51  
 ἀρμονία] musical scale; *see also* σύστημα 14, 39, 44, 74  
 ἁρμονική] harmonics 2, 34  
 ἁρμονικοί, οἱ] music theorists 3, 20, 49, 58, 97n171  
 ἀρτηρία] trachea, windpipe 56  
 ἀρχή] principle 57, 82  
 αὐλός] *aulos* 7n29, 76, 106n203  
 αὐξησις] increase, growth 47  
 γίγνεσθαι] to come into being 11  
 γλῶττα, γλωττίς] lit. tongue, part of the *aulos* mouthpiece 76  
 διὰ πάθος] ‘due to an affection of the soul’ or ‘by accident’ 15n62, 86n145  
 διάστημα] distance (and, as musical term, interval) 3, 20, 50, 57–58, 68  
 διὰ τεσσάρων] lit. through four (notes), the musical interval of fourth 16–17, 69–72  
 διὰ πέντε] lit. through five (notes), the musical interval of fifth 16–17, 69–72  
 δι’ ὀξείαν] ancient name of the musical interval of fifth 8, 16–17, 69–72  
 δύναμις] power 7, 35n13, 54, 58–59  
 δυσχέρεια] nastiness 95  
 ἐκμέλεια] non-melodicity 58, 66  
 ἔλεος] pity 84  
 ἐμμέλεια] melodicity 58, 67  
 ἐνθουσιασμός] divine inspiration 35, 82, 84  
 ἐνότης] unity 68  
 ἐπαιδοῖ] enchantment 106  
 εὐρετής (πρώτος)] (first) discoverer, inventor 36, 73–74  
 ἡδονή] pleasure 35, 82  
 ἦθος] character 77  
 ἰδικός] special 82  
 ἰδιότης] peculiar quality (of high and low sounds) 7, 58–59, 61  
 κάθαρσις] purification 18  
 καλός] beautiful, noble 10–11  
 κίνημα] motion, movement 21, 60, 86, 101–103  
 κίνησις] movement 9, 15, 20–21, 78, 86, 89  
 λειότης] smoothness 68  
 λέξις] speech 49, 100  
 \*λίγγειν] to twang (Homeric verb) 5n17  
 λόγος] mathematical ratio 3, 33, 68  
 λύπη] sorrow 35, 82  
 μαθηματικοί, οἱ] a group of Pythagoreans 4n12  
 μανότης] sparseness 47  
 μέγεθος] magnitude 54  
 μέλισμα] melody sung without words 106  
 μέλος] melody 25n18, 33, 61, 100  
 μελωδέω] to produce a melody 55, 112  
 μελωδητικός] able to produce melody 60–61, 86, 101–103  
 νόμος] law; a traditional song 12  
 νόμος Πυθικός] a mimetic piece of music 74, 112n232  
 ὄρχησις] dance 10–11  
 ὀρχηστής] dancer 73, 108

- πλαταγή] an idiophone reportedly invented  
 by Archytas 93  
 πληγή] blow and, in acoustic contexts, an  
 impact that produces sound 5  
 πληθος] plurality 49, 51, 53  
 ποιεῖν] to compose and/or perform music 10  
 πολεμικόν, τὸ] a warlike trumpet call 111–113  
 πολιτικοί, οἱ] a group of Pythagoreans 4n12  
 ποσότης] quantity 51  
 πρόβλημα] question 41, 44, 80  
 πτώσις] incidence (of the voice) 85  
 πυκνότης] density 47  
  
 ρυθμίζειν] to shape, to educate, or to affect  
 with rhythm 97–98, 100  
 ρυθμός] rhythm 33  
  
 σάλπιγξ] trumpet 110–113  
 σικελίζω] to behave badly; to be in a bad state;  
 to play like the Sicilians 78–79  
 σίκιωνις] a warlike dance 108  
 σκόλια, τὰ] lit. crooked songs, performed at  
 banquets and drinking-parties 44  
 σπονδειακόν or σπονδειον] libation tune 18,  
 35  
 συλλαβή] ancient name of the interval of  
 fourth 8, 16–17, 69–72  
 συμπαθεια] affinity 68  
  
 συμφωνία] musical concord 2, 43, 68–72  
 σύριγξ] a device applied to the *aulos* 41,  
 42n16  
 σύστημα] a musical concord which is  
 obtained from the composition of others  
 16n63, 17, 69–72  
  
 τάσις] lit. tension, hence pitch in music 8, 58  
 τέρψις] pleasure 97  
 τόνος] tension, *see also* τάσις 8, 44n24  
 τρέπειν] to bend or turn 95  
  
 ὑπεροχή] excess 68  
 ὑποκριτής] actor, performer 75  
 ὑποκριτική] the art of delivery 13  
  
 φθόγος] musical note 1n2, 20, 85  
 φόβος] fear 84; panic attack 108  
 φορά] movement 9  
 φύσις] nature 60, 89  
 φωνή] voice 20–21, 58n65, 84, 94n166, 100,  
 111  
  
 χρώα] shade (of colour) 48n40, 61  
  
 ψυχή] soul 10–11, 21  
  
 ᾠδή] song 10–11

## Latin

- delenimentum*] release 89  
*ingenium*] natural disposition 87  
  
*tibia*] the Latin equivalent of the Greek αὐλός  
 26, 76–77, 113n234  
*tibicen*] *tibia*-player 77n114, 112–113

## Arabic

- lahn*] rhythm, melody or speech 104

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